DOCUMENT RESUME

ED 430 396 FL 025 830

AUTHOR Appel, Marie Christine
TITLE Tandem Language Learning by E-Mail: Some Basic Principles and a Case Study. CLCS Occasional Paper No. 54.
INSTITUTION Trinity Coll., Dublin (Ireland). Centre for Language and Communication Studies.
ISSN ISSN-0332-3889
PUB DATE 1999-00-00
NOTE 66p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Case Studies; Communicative Competence (Languages); Computer Mediated Communication; Cooperative Learning; *Electronic Mail; *English (Second Language); Foreign Countries; Instructional Effectiveness; International Programs; Language Skills; *Peer Teaching; Personal Autonomy; Second Language Learning; *Second Languages; Skill Development; *Spanish; Teaching Methods
IDENTIFIERS *Asynchronous Learning Networks; Denmark; Ireland; Spain

ABSTRACT

A study investigated the effectiveness of tandem second language learning using electronic mail (e-mail). Tandem language learning refers to a partnership between two learners, each learning the other's native language. The underlying principles of reciprocity and learner autonomy are explored, use of asynchronous communication between individuals for language learning is discussed, and theory on communicative language learning and the role of writing in language learning is examined, and the study is presented. Subjects were seven dyads of native English- and native Spanish-speaking adults of varied second-language proficiency levels, located in Ireland, Denmark, and Spain. Data were drawn from analysis of e-mail messages and a survey of participants. Analysis focuses on choice of language, type of language used, nature of cultural exchange, style and quality of peer feedback, development of language usage awareness, communication strategies, and students' comments and attitudes. Conclusions and areas for further research are discussed. Contains 53 references. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 430 396

TRINITY COLLEGE DUBLIN

Centre for Language and Communication Studies

Tandem language learning by e-mail: some basic principles and a case study

Marie Christine Appel

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CLCS Occasional Paper No.54

ISSN 0332 3889

Spring 1999

FL 025 830

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

D. G. Little

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

CLCS Occasional Papers

General Editor: D. G. Little

CLCS Occasional Papers report on research carried out within or in association with the Centre for Language and Communication Studies, and on research carried out elsewhere which is of special interest to the Centre's own concerns and activities. In some instances they present the texts of public lectures promoted by the Centre.

The following titles have been published and are available from The Secretary, Centre for Language and Communication Studies, Trinity College, Dublin 2.

Autumn 1981

1. D. M. Singleton, *Language transfer: a review of some recent research* (31pp.)
2. Jeffrey L. Kallen, *Linguistics and oral tradition: the structural study of the riddle* (33pp.)
3. D. M. Singleton, *Age as a factor in second language acquisition* (70pp.) - OUT OF PRINT

Summer 1982

4. Francis Nolan, *Voice quality and speech synthesis* (30pp.)
5. Roger Bennett, *Language elicitation procedures* (23pp.)

Winter 1982-3

6. S. M. Devitt, D. G. Little, S. P. Ó Conchúir & D. M. Singleton, *Learning Irish with* Anois is Arís (128pp.) - OUT OF PRINT

Autumn 1983

7. William T. Littlewood, *A communicative approach to language-teaching methodology* (19pp.)
8. Rose Maclaran, *On the interaction of semantics and pragmatics* (18pp.)
9. E. M. Harding, *Compensation strategies* (54pp.)

Autumn 1984

10. Jeffrey L. Kallen, *Generative phonology in the clinic* (38pp.)
11. Gearóid O Ciaráin, *The affective dimension in second/foreign language learning: an interactional perspective* (42pp.)

Spring 1985

12. D. M. Singleton & D. G. Little, *Foreign languages at second level: defining a syllabus, with particular reference to the needs of the senior cycle* (19pp.)
13. John Harris, *The polylectal grammar stops here* (12pp.)

Spring 1986

14. D. G. Little & A. J. Grant, *Learning German without a teacher. Report on a self-instructional programme for undergraduate students of Engineering Science at Trinity College, Dublin, 1982-1984* (60pp.)
15. Máire Owens, *Eithne: a study of second language development* (62pp.)
16. D. Wilson & D. Sperber, *Pragmatics: an overview* (36pp.)

Autumn 1986

17. Ailbhe Ní Chasaide & Eugene Davis, *A data-processing system for quantitative analysis in speech production* (28pp.)
18. Seán M. Devitt, *Learning a foreign language through the media* (69pp.)
19. Meriel Bloor & Thomas Bloor, *Languages for specific purposes: practice and theory* (34pp.)

Spring 1988

20. D. G. Little & D. M. Singleton, *Authentic materials and the role of fixed support in language teaching: towards a manual for language learners* (26pp.)

Spring 1989

21. Seán M. Devitt, *Classroom discourse: its nature and its potential for language learning* (72pp.)
22. V. J. Cook, *The relevance of grammar in the applied linguistics of language teaching* (43pp.)

Spring 1990

23. Sera De Vriendt & Pete Van de Craen, *Bilingualism in Belgium: a history and an appraisal* (52pp.)
24. David Singleton, *The cross-linguistic factor in second language learning: a report on some small-scale studies recently conducted at the CLCS* (20pp.)

CLCS Occasional Paper No.54
Spring 1999

Tandem language learning by e-mail: some basic principles and a case study*

by

Marie Christine Appel

1 Introduction

1.1 Language learning in tandem

The term *tandem* implies collaboration and simultaneity. When applied to language learning, it refers to a partnership between two learners, each of whom is learning the other's native language. Tandem learners meet and work together with the purpose of helping one another to learn their respective target languages (TL). In this way, both learners have the opportunity of engaging in real communication with an expert in their TL.

Tandem learning rests on two principles, the *principle of reciprocity* and the *principle of learner autonomy* (Brammerts 1996, pp.10f.). The principle of reciprocity states that the success of the exchange depends on a reciprocal partnership in which both participants profit equally from one another's help. The principle of autonomy has to do with being in charge of one's own learning. This principle is central to the topic of this paper and is further discussed in section 2.5.

The problem with face-to-face tandem meetings is that it can be difficult to find native speakers of the target language in one's L1 environment. Electronic mail can be helpful in solving this problem as it can overcome geographical distance. An objection which has been made regarding e-mail tandem exchanges is that they only enhance

---

* An earlier version of this paper was submitted in fulfilment of the requirements of the M.Phil. degree in Applied Linguistics, University of Dublin, Trinity College, Michaelmas term 1997.

writing and reading skills as the interaction takes place through the written medium. This criticism is based on the assumption that the traditional distinctions between the four language skills – i.e., writing, reading, speaking and listening – hold true. The present study of the language learning process in e-mail tandem exchanges takes a communicative approach. Following Canale and Swain (1980), second language learning is viewed as the development of communicative competence and not as the individual development of four unrelated skills. Canale and Swain's communicative model is further discussed in section 2.2.

1.2 E-mail and tandem language learning

This study focuses on the use of asynchronous communication via e-mail between individuals and examines the results of an e-mail tandem exchange. This exchange is similar to a pen-pal writing exchange through ordinary post ("snail-mail" in the Internet jargon), providing the benefits of ordinary mail but overcoming most of its problems, the most obvious one being (as the term snail-mail suggests) the time delay between the sending and receiving of the letter. The main purpose of the exchange is to enable two students who are situated in distant geographical locations to collaborate with and support one another in their efforts to learn the other's native language.

As regards the four skills mentioned above, the standpoint taken here is that an e-mail tandem exchange is not concerned exclusively with writing and reading skills. E-mail uses the written medium. However, this does not imply the same contextual situation and writer–reader relationship that apply to other types of writing activities. Here, the writing need not consist of monologues. There is the potential for constant dialogue between the two correspondents who establish a relationship through the messages they write to each other. Moreover, the REPLY command which automatically pastes the message received into the text enables the writer to construct a written dialogue using information produced by the interlocutor and his/her own response. The language used is informal and close to what is traditionally known as informal spoken language (see section 4.2). Concerning the shared here-and-now characteristic of spoken language, it is true that the interlocutors do not share a geographical location. Temporal proximity, on the other hand, depends upon the participants. Once sent, the message will be received immediately provided the receiver is connected

to the net at that moment. Messages can be sent back and forth in very little time, bringing this type of written communication closer to spoken interaction.

Another aspect of the e-mail exchange is that it does not involve one writer and one reader but rather two participants engaged in a communicative event in which they both act as writers and readers, in the same way that two individuals having a face-to-face conversation are both speakers and listeners. We can say then that e-mail comes close to what Widdowson (1978) refers to as *reciprocal communication*. Widdowson abandons the spoken versus written dichotomy in favour of a distinction between reciprocal versus non-reciprocal communication, where the criterion is the degree of interaction between the producer and the receiver in real time. Examples of reciprocal communication are spoken conversation and synchronous written communication on the Internet. Examples of non-reciprocal communication are speeches and reports.

Many descriptions of e-mail exchanges can be found in the literature on language learning, although most of them focus on the logistics of carrying out this type of activity. For the teacher, these accounts provide helpful information on how to go about finding pairs for one's own students (Warschauer 1995), how to instruct students on initiating the exchange, how to integrate e-mail writing within a specific project or classroom activity (Barson, Frommer and Schwartz 1993, Barson and Debski 1996), technical problems to look out for (Kendall 1995), and so on. These are all, without any doubt, valuable pieces of information which contribute to maximizing the success of an exchange.

It is more difficult, however, to find studies that deal directly with the question of the quality and kind of learning which takes place in such an environment. If we are to integrate the use of e-mail tandem in foreign language classrooms and programmes it is imperative that we reach a more thorough understanding of how e-mail tandem exchanges contribute to students' language learning, and which aspects of communicative competence gain most strength from it. Taking advantage of other studies dealing with the logistics of e-mail tandem, this study sets out to explore the language learning process embodied in e-mail exchanges.

Section 2 presents several topics which are relevant to a discussion of tandem language learning via e-mail. First of all, language learning

is viewed in light of a Vygotskian theory of communicative learning which emphasizes the role of interaction and collaboration in language acquisition. Following this approach, the communicative competence models of Canale and Swain (1980) and Bachman (1990) are introduced. Next, two senses of the term *writing* are examined: writing as the technology used in an e-mail exchange and the effects it has on linguistic awareness and second language acquisition (SLA); and composition writing and its relation to e-mail writing. This is followed by a discussion of learner autonomy, another factor which plays an important role in e-mail tandem language learning. Finally, the last part of section 2 reviews recent publications related to the use of e-mail for language learning.

The case study undertaken to explore these issues is described in section 3, and the results of the study are presented in section 4 and discussed in section 5.

2 Theoretical background

2.1 A communicative learning theory

The work of the Russian psychologist L. S. Vygotsky has become widely known in the West since the first translation of his book *Thought and Language* in 1962. In the last decade his ideas have exerted a significant influence on the field of education and have provided a theoretical framework for developing views of teaching and learning. In his analysis of first language acquisition, Vygotsky (1978) emphasizes the twofold nature of language: the *social* aspect and the *cognitive* aspect. Language is used both for communication and as a tool for thinking. These two functions assist each other within a teaching/learning framework and actively interact in the process of discovery and knowledge construction. Prompted by a need for communication the child develops language through interaction with members of its social environment. Language will, in its turn, become a tool for the child's cognitive development in that it allows the child to see and reflect on the surrounding world. In other words, it fosters the development of *inner speech*. The social-interactive nature of both language and cognitive development is a key factor in Vygotsky's work and the influence it has had on educational models. This is reflected in Vygotsky's description of a stage of development which he calls the *zone of proxi-*

6A

mal development (ZPD). He defines ZPD as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky 1978, p.86).

Vygotsky's ZPD and its entailment of collaboration between a learner and a more able individual result in educational applications which move away from authoritarian teaching towards collaborative task performance. Bruner (1978) examines the way in which an individual becomes actively involved in the learning process of a less able individual. He uses the term *scaffolding* in relation to the cognitive support given to a child in order to help him perform a task. Mercer (1995) discusses scaffolding in the classroom and studies how learning can be developed by collaboration between students working at computers in groups. In these students' dialogues he identifies three types of talk: *disputational talk, cumulative talk* and *exploratory talk*. Disputational talk is characterized by short exchanges and individualized decision making; cumulative talk is typified by confirmations and elaborations in which students respond positively but uncritically to what their peers say; in exploratory talk students respond to their peers with constructive criticism, and in doing so their knowledge and reasoning are made explicit for both their peers and themselves.

The Vygotskian model of first language acquisition is relevant for second language acquisition, and more specifically for second language acquisition via e-mail tandem learning, for several reasons. First of all, the assertion that learning takes place through collaborative interaction and the notion of scaffolding need not be exclusive to first language acquisition and can be extended to other types of learning. In pedagogical methodologies within the communicative approach, teachers provide students with support in their language learning and group work promotes collaborative interaction between students. The e-mail tandem exchanges generate collaborative interaction between a learner and a native speaker of this learner's TL who can provide assistance in the process of learning. The continuance of the collaborative interaction is ensured by the mutual interest in collaborating, since both members of the exchange alternate in the roles of learner and native speaker.

In relation to the first point made, it is important to note that collaborative interaction does not mean a decrease in learner autonomy,

a key aspect of e-mail tandem learning. An important feature of learner autonomy is precisely the ability to maximize the benefits of collaborative interaction. The role of learner autonomy in relation to the e-mail tandem exchange is further discussed in section 2.5.

The second reason why the Vygotskian model is relevant to SLA is the relationship it establishes between language and thought (Little 1997). Little summarizes the argument as follows:

> if our learners are to become autonomous second language users, and especially if they are to achieve worthwhile writing skills, they will do so to the extent that they develop a capacity for "internal speech", for thinking in their target language. (ibid., pp.23f.)

E-mail tandem exchanges seek to develop learners' inner speech in the TL by making them use the language through interaction, exposing them to authentic language and providing them with cultural information about the TL community.

In the next section I describe models of communicative competence which relate to neo-Vygotskian communicative and socio-cultural theories in that they consider, in addition to language knowledge itself, the ability to put this knowledge to use in a given context.

2.2 E-mail tandem learning and a communicative competence model

The communicative nature of the e-mail tandem exchange has already been discussed in section 1. It has been stated that this study rejects the view of language learning as the individual development of four unrelated skills, and that the present analysis of the learning process in e-mail tandem exchanges is based on a communicative approach. A communicative approach takes into account language as well as the context and participants involved in a communicative event. It follows that this study diverges from the assumption that the e-mail tandem exchange contributes only to the development of skills related to either spoken or written language. Instead, the assumption is that the e-mail tandem exchange contributes to the learner's overall L2 communicative competence and the learner's capacity to develop this communicative competence. This section discusses the models of communicative competence elaborated by Canale and Swain (1980) and Bachman (1990), with the purpose of exploring how the e-mail tandem exchange relates to their different components.

7A

Canale and Swain (1980) formulated a theoretical framework for communicative competence in which three components are defined: grammatical competence, sociolinguistic competence and strategic competence. Grammatical competence comprises knowledge of phonology, morphology, syntax, lexis and sentence-grammar semantics. Sociolinguistic competence consists of sociocultural rules and rules of discourse. Finally, strategic competence includes verbal and non-verbal communication strategies which are used to prevent or repair communication breakdowns. Later, Canale (1983) revised the model and defined a fourth type of competence, discourse competence, which includes rules of discourse only (as distinct from sociocultural rules). He also added a further dimension to strategic competence, that of increasing the persuasive effect of language use.

In arguing for a communicative approach to second language teaching and testing, Canale and Swain make several points which are relevant to the e-mail tandem exchange as a communicative language learning activity:

- Although communication is not the essential purpose of language, communication is an important function of language. The communication role is particularly significant in regard to second language use. Thus, communication is taken to be the essential goal of a second language learner (ibid., p.23).
- If communication is the ultimate goal in language teaching, a communicative approach should be adopted. If this is the case they state that

  > teaching methodology [...] must be designed so as to address not only communicative competence but also communicative performance, i.e., the actual demonstration of this knowledge in *real* situations and for *authentic* communication purposes. (ibid., p.6)

  E-mail tandem exchanges provide students with both elements emphasized above: real situations and authentic communication purposes. These two elements engage learners in actual use of the TL.
- Language learners need to know what a native speaker of their L2 is likely to say in a given context. In other words, they need knowledge of what actually occurs in situations of real language use. This concept is related to the probabilistic system of competence in Hymes's (1972) definition of communicative competence. The e-mail tandem exchange provides contact with a native speaker of the TL

and thus continual exposure to the type of language which is actually used by native speakers. It is hoped that the learner will develop from this an intuition of whether certain expressions are likely to feature in native-speaker language use and in what contexts.

- Language learning is most effective when there is an emphasis on getting one's meaning across. However, a warning against underestimating grammatical competence is made. Grammatical competence on its own does not provide learners with communicative competence, but grammatical competence is essential for successful communication. In the e-mail tandem exchange, there is an emphasis on conveying meaning which arises from the authentic communicative nature of the interaction. Having said this, it is important to stress that the exchange is not the same as correspondence with a pen-pal. It is designed as a collaborative learning undertaking in which participants are urged to take charge of the learning process by, among other things, focusing on several aspects of their language and their tandem partner's language.

Bachman's (1990) description of communicative language ability (CLA) elaborates on other models of communicative competence, including Canale and Swain's. He develops the model and delivers a more detailed presentation of how elements of communicative competence relate to each other. Bachman's model of CLA encompasses three components: language competence, strategic competence, and psychophysiological mechanisms. Psychophysiological mechanisms are related to the physical production of language and the neurological and psychological processes involved. Strategic competence enables a per-

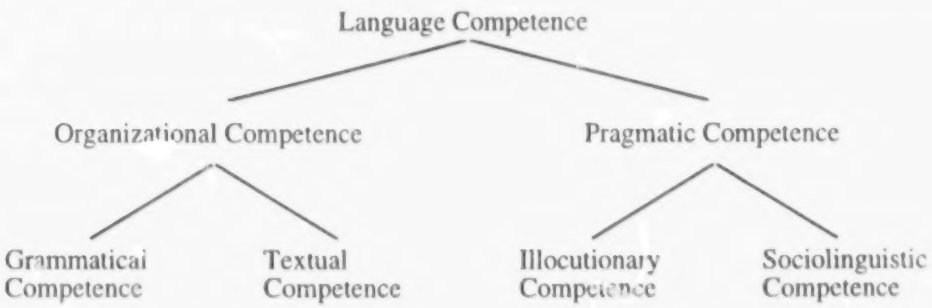

Figure 2.1 – Language Competence (Bachman 1990, p.87)

son to use his language competence in a contextualized situation. It is a more psycholinguistic definition than the interactional notion of strategic competence in Canale and Swain (Bachman 1990, pp.98f.). Language competence is subdivided into several knowledge components which are used in linguistic communication (Figure 2.1).

Bachman distinguishes two types of language competence: organizational competence and pragmatic competence. Organizational competence involves what has traditionally been understood as grammatical knowledge, whereas pragmatic competence comprises the relationship between utterances, and the participants and context of the communication situation. Pragmatic competence corresponds to Canale and Swain's sociolinguistic competence. Under the rubric of organizational competence, Bachman's grammatical competence corresponds to Canale and Swain's grammatical competence, while the notion of textual competence corresponds to discourse competence in Canale and Swain's model.

In Section 5, I will discuss to what extent the e-mail exchanges examined in this study affected or were affected by strategic competence and each component of Bachman's language competence. Even though the argument in this study is that the benefits of e-mail tandem exchanges are not tied to the development of either speaking or writing skills, it is of course the written channel that is used. The use of the written channel will entail certain psychophysiological mechanisms related to language processing and production which are not subject to the same time constraints as in the spoken channel. A thorough investigation of these mechanisms and their relation to e-mail tandem is beyond the scope of this paper.

2.3 E-mail tandem learning and writing

The e-mail tandem exchange takes place through the written medium. The term *writing* has been used in the past to mean different things and it is important to make clear what use of the word is intended here, before making any further statements about the effects of e-mail tandem on writing and vice versa. One can distinguish two main uses of the term writing: writing as a technology for transcribing speech and assisting memory, and writing as composition. Composition refers to the range of skills involved in producing text that meets academically accepted criteria of textuality and style. This requires, among other things, the use of coherence and cohesion devices characteristic

of different types of genres. The relationship between e-mail tandem exchanges and composition skills is further discussed in section 2.4. In this section I will discuss the use of the technology of writing in relation to literacy and linguistic awareness, and will apply these two factors to second language learning.

2.3.1 Literacy and linguistic awareness

Olson (1994) states that literacy affects cognition in that writing and reading provide a model of thinking about speech and language. He views writing not as transcription of speech but rather as a model for speech. The classical assumption that writing is a full representation of speech presupposes that writers already know about the structures of language. Olson argues through an account of the history of writing that the contrary is true: writing makes people think about speech and makes them view speech in terms of the categories which a specific orthographic system embodies. Olson's argument is supported by various studies of metalinguistic awareness in illiterate individuals. One of these studies is by Scholes and Willis (1991), who found that illiterate individuals did not have the same phonemic, morphemic, and syntactic knowledge as literate speakers of a language have and, among other problems, had difficulties in segmenting subsyllabic constituents.

Writing and reading enable a person to abstract from his own text and observe analytically how language is constructed and put to use. In other words, literacy promotes linguistic awareness.

2.3.2 The role of writing in SLA

Little (1997) suggests that the technology of writing plays an important role in second language acquisition for two main reasons: it supports the development of speaking and the growth of the learner's metalinguistic awareness. When children acquire their first language they do not have a mature enough cognitive framework to acquire literacy. The normal path is for speaking fluency to precede writing fluency. This is not the case in SLA: second language learners are normally already literate in their first language. This is a fact worth taking advantage of when they approach second language learning. A good example, as Little points out, is the pedagogical method used by Dam (1995) in EFL teaching. Dam uses mostly English in the classroom and makes her students write in English from the very first day. This method produces outstanding results as regards the achievement

of communicative competence and the development of learner autonomy.

The development of metalinguistic awareness from the use of writing was discussed in the previous section (2.3.1) and applies equally to SLA. Writing allows the student to make language an object of reflection. In SLA this reflection will also lead to the observation of similarities and differences between the learner's L1 and L2. The use of both languages in e-mail tandem writing promotes a contrastive analysis which deepens the learner's metalinguistic awareness, which in turn fosters learner autonomy.

Another feature of e-mail tandem learning which contributes to SLA is that it provides an interactive structure for writing. Rueda (1990) argues that writing should be interactive in cases where support is needed in order to develop writing skills, and one of the media he proposes for this is e-mail. Interactive writing acts as a scaffold for composition writing, which is more cognitively demanding, since the writer has to produce text without the support of an interlocutor and to create a situation to represent to himself (Vygotsky 1962, p.99).

2.4 E-mail tandem learning and composition

The 1980s witnessed a sort of tug-of-war between writing product and writing process approaches which, as Hairston (1982) had predicted, culminated in a paradigm shift in the teaching of writing. The traditional view that composing was a linear process together with the emphasis on the finished product of writing were abandoned in favour of a process writing approach. Flower and Hayes (1981) propose a cognitive process theory of writing in which they distinguish three writing processes: planning, translating and reviewing. These processes are divided into further sub-processes which occur recursively during the act of composing. They also state that writing is a goal-directed process and that there is a reciprocity between the creation of goals and the generation of ideas. Awareness of the reader is also considered a crucial element in what Flower (1979) calls *reader-based* prose, i.e., prose which takes into account the intended reader's comprehension of the text. A process approach to teaching writing was developed from this new view of composition processes. In this new approach emphasis is put on multiple-draft writing and feedback (both teacher and peer feedback). A number of stages in writing are identified and taught: pre-writing, planning, drafting, feedback, editing and re-drafting.

These stages do not necessarily have to occur in this order. The process approach also focuses on writing for a real audience and writing about topics which students are interested in. More recently, the external social context of the writing situation has been added to Flower and Hayes's cognitive model in models such as the one proposed by Grabe and Kaplan (1996, p.226).

E-mail tandem writing provides a basis for some elements in the teaching of composition but not necessarily all of them. It gives students freedom to choose their own topics. It provides a real reader, feedback and the possibility of using advanced editing tools in the word processor. What is less clear, however, is the extent to which e-mail develops pre-writing, planning and re-drafting skills. This is an area that is examined in this study.

Another aspect to be taken into account when discussing the development of composing skills in relation to e-mail tandem writing is the role of the computer, and in particular the impact the word processor has had on the teaching of composition writing. Dam, Legenhausen and Wolff (1990) conclude that the use of the word processor influences learners' writing strategies and that it has an impact on students' attitude to the writing task. It influences writing strategies by reducing the complexity of the writing process. The planning stage is facilitated, allowing students to note down the first words and then consider various ways of continuing the sentences. Spelling checks and commands such as DELETE, CUT and PASTE prevent an excessive concern with form and encourage editing at a deeper level. Because re-drafting is much easier, students are more willing to take risks. Revision is also easier because the distance put between the writer and the text by the screen itself facilitates error identification.

However, there is some disagreement on these points. The objection has been made that word processor editing tools only encourage surface revision and that, as a result, substantial changes in re-drafting occur in a smaller degree (Joram, Woodruff, Bryson and Lindsay 1992, cited in Kellogg 1994, p.144). Kellogg (ibid.) argues that the use of a word processor alters the writing process: graphic modes of planning and global editing are more difficult and therefore time spent in planning and reviewing increases. In discussing these points in relation to e-mail writing, it should be borne in mind that the final product in e-mail is not converted into hard copy but sent in its electronic format. This might have negative effects on the development of editing

and re-drafting skills.

Finally, another source of influence in composition writing is the question of contrastive analysis, already mentioned above in section 2.3. In the present case, in which Spanish and English are the objects of contrast, students need to be aware that Spanish writers prefer a more elaborated style of writing using more subordination and co-ordination in sentence formation (Grabe and Kaplan 1996, pp.194f.).

2.5 Learner autonomy

Little (1991, p.4) defines autonomy as a "capacity – for detachment, critical refection, decision making, and independent action". This capacity is inherent in human nature and is a capacity which prompts the child to develop. Traditional expository teaching, ironically enough, often stifles the development of learner autonomy. Learner autonomy is generally discussed from two main perspectives: the political and the psychological. From the political perspective, it is important to develop autonomy because it bestows on learners the freedom to make their own choices about the content of their learning, and will thus help to prevent political manipulation of the masses (Freire 1972). From a psychological perspective, autonomy entails an attitude to learning which breaks down the barriers between what is taught and its applications in real life. Autonomy will assist the learner in applying the knowledge acquired in a given learning context to different situations which may subsequently arise.

In his discussion of learner autonomy, Little (1991) draws on strands of cognitive psychology dealing with active problem-solving (Bruner 1966, 1977), the psychology of personal constructs (Kelly 1955, Bannister and Fransella 1989) and socio-cultural psychology (Vygotsky 1962, 1978). The learner is seen as an active participant in his own learning, collaborating with others in solving problems and constantly reshaping his personal constructs by making and testing hypotheses in daily experience.

The capacity for autonomy is essential for the process of language learning: it enables the learner to assume responsibility for his own learning by reflecting on his TL experience, and by taking control of the content and context of further contact with the TL in order to maximize the learning benefits. This entails a shift in responsibility for language learning from the teacher to the learner. This shift calls for a change in the role of the teacher. The teacher should act as a facilitator

creating a context conducive to the development of learner autonomy. Little (1995, p.4) poses the following question as a crucial one in the discussion of learner autonomy: "how should we set about fostering the development of those capacities [the capacities that go to make up learner autonomy] in particular contexts of learning?". One possible answer is e-mail tandem learning. In an e-mail tandem exchange learners are engaged in real, meaningful, and voluntary communication with a native speaker of their TL. However, this native speaker is not a teacher trying to impart a predetermined body of knowledge. Instead, it is up to the learners to exploit their partner's L1 expertise in ways that can facilitate their own learning of this language.

At this point a paradox arises: for the exchange to be successful the learner needs a minimum of autonomy which will then further develop as a result of the exchange. This is "the paradox on which the development of learner autonomy is founded: in order to achieve autonomy, learners must first be autonomous" (Little, to appear). Thus, even though autonomy cannot be taught, the teacher or co-ordinator of the exchange nevertheless needs to monitor the exchange closely in its early stages, in order to support and draw attention to the learning process in cases where autonomy is still underdeveloped.

2.6 Review of related literature

2.6.1 E-mail tandem learning within CALL

Warschauer (1996a) distinguishes three phases in CALL. The first one he calls *Behaviouristic CALL*. Behaviourist approaches to language teaching used the computer as a simple exercise-correcting tool in order to provide students with a source for grammar practice. The computer was ideal for this kind of activity because it could provide immediate correction repeatedly, without getting tired or bored. However, the computer can identify only a limited number of possible right answers. The limitations of the interaction between learner and computer proved to be huge. *Communicative CALL* was the next phase of CALL, in which, in addition to the use of computers as an authoritative source of knowledge, the computer was seen as a stimulus for discussion and critical thinking through the introduction of group work activities, and as a tool that can carry out certain tasks with higher speed and precision than human beings. The impact that the word processor has had on writing strategies has already been discussed in section 2.4.

The third phase of CALL described by Warschauer is *Integrative CALL*, in which task-based approaches are used to integrate skills. Multimedia and hypermedia provided an initial step towards integrative CALL. The definitive step came about with the Internet, which makes possible computer-mediated communication (CMC). CMC is the computer application with the greatest impact on language teaching and learning. With it the use of computers in language learning becomes fully interactive and exposes the learner to authentic experience of the target language. It is within CMC that we place the use of e-mail for language learning.

2.6.2 Use of e-mail within an educational context

E-mail has been used to improve the relationship and communication between the teacher and students and also to support and enhance dialogue and collaborative learning between students. One of the uses made of e-mail is that of promoting communication between students in the same class. Chun (1994) reports that computer-assisted class discussion through e-mail increases the number of different interactional speech acts made by learners, and suggests that the communicative proficiency acquired can gradually be transferred to spoken discourse. E-mail has also been used in composition classes as a means of giving feedback. Hoffman (1994) used e-mail for both teacher and peer feedback. He found that because of its indirectness this medium seemed less face-threatening than other forms of communication, allowing students to profit more from productive criticism. He also found that the use of e-mail contributed to student motivation and willingness to take risks with language and style, and that more substantive changes were made in re-drafts.

E-mail exchanges between students in distant places but sharing the same L1 have also taken place. Johnson (1996) paired up students learning Spanish in two different schools in the same country. The results were positive in that the cultural proximity facilitated communication between students who were at beginners' level. Another positive aspect was that the whole exchange took place in the students' TL. This type of exchange might be beneficial for students at beginners' level who could later move on to an e-mail tandem exchange with a native speaker of their TL.

Some teachers have integrated e-mail within a task-based programme in which it is used as a means of obtaining information for a

certain project, or in which a collaboration between two e-mail partners takes place in order to accomplish a given task (Barson, Frommer and Schwartz 1993, Barson and Debski 1996).

A recurrent feature found in studies which examine exchanges through e-mail (Warschauer, Turbee and Roberts 1996, Peterson 1997) is learner empowerment through the development of learner autonomy, equality and interactive skills. In regard to autonomy, the factors of distance and time are no longer constraints and often result in an increase in written output. Students gain more control over the content of writing and seem to move towards a higher control of their learning process. E-mail eliminates differences in physical appearance and results in more equality in interaction. Students who are at some kind of disadvantage in face-to-face interaction (because of gender, race, membership of a minority group, physical handicap or simply shyness) gain confidence and increased opportunities for turn-taking through e-mail. All these factors also play a role in e-mail tandem exchanges.

2.6.3 Case studies with a focus on language learning

The following three studies focus particularly on the language learning process that takes place in an e-mail exchange. The earliest one is by Austin and Mendlick (1993), in which two schools, one in Northern Ireland and one in Germany, agreed to participate in an e-mail exchange. Students ranged in age from 14 to 16 and wrote messages in groups of two and three over a period of four weeks. Students exchanged personal information to begin with and then engaged in a translation task. The results of the study suggested evidence of an improvement in vocabulary, accuracy and cultural awareness.

St John and Cash (1995) report on an exchange that took place between an English student learning German and a native speaker of German. Since the sole purpose of the exchange was to improve the English student's level of German, the whole exchange was conducted in German. The results show that the student benefited greatly from the exchange in the areas of vocabulary, idiomatic expressions, register, and complexity and length of sentences. His knowledge of grammar improved through inductive learning: he spotted regularities in his partner's language use and formed rules from them. The substantial learning progress the student made was probably due to his high degree of autonomy. He developed his own strategies for making the most out of the exchange: he copied all new words and expressions into a data file which served as his personal dictionary; he made a

deliberate attempt to recycle all new words and structures encountered; and he virtually copied chunks of language used by the native speaker and inserted them in his own writing. The results from this study emphasize two important points for the success of language learning in an e-mail tandem exchange:

- The key role of the native speaker's messages as a model, and hence the importance of maintaining an even division of writing in L1 and L2 when both members of the pair are learning a language. In this way both learners can benefit equally from using and modelling their L2.
- Learner autonomy multiplies the benefits of e-mail tandem learning, and the practice of e-mail tandem in turn fosters greater learner autonomy.

Woodin (1997) describes an e-mail tandem project which took place within the English-Spanish subnet of the International E-mail Tandem Network (see section 3.1). She studied six subjects who were undergraduate students in Sheffield learning Spanish and writing e-mail to undergraduate students in Oviedo learning English. In this study the messages written were not bilingual. Partners on either side wrote only in their L2 and were expected to obtain exposure to L2 input from reading messages sent to the Spanish/English subnet discussion list (Forum), where contributors wrote mainly in their L1. This arrangement does not follow the principles of the International E-Mail Tandem Network: Little and Brammerts (1996) emphasize the importance of using both languages in any tandem exchange so that both members of a pair get equal opportunities to read and write in their L2. Exposure to TL input in the Forum does not serve the same purpose as exposure to TL input from one's tandem partner. Woodin herself reports that one of her subjects found the messages in the Forum more difficult to understand than magazines. Students can have access to a great variety of authentic TL samples by simply surfing the Internet. The benefits of being exposed to one's e-mail tandem partner's language relate to the facilitating effects of modified input (see section 4.2.), including the potential for the learner to recycle words and expressions which are in his ZPD. Language in the Forum will often surpass this ZPD. In this respect, the advantages of writing bilingual messages have already been noted above in relation to St John and Cash (1995).

Another drawback of Woodin's study is that she examined one side of the exchange only – the English-speaking students – and thus

missed out on a further set of insights into the learning process, since messages are often only interpretable in the context of the contributions from both sides. In regard to the analysis of corrections, Woodin points out that subjects did not correct all mistakes and that often they would pick mistakes different from the ones a teacher would select for correction. According to the guidelines for feedback in Little and Brammerts (1996), it is not necessary to correct all mistakes since this could mean a lot of extra work for the native speaker and could also potentially discourage the learner. On the question of what mistakes should be corrected, feedback from the native speaker will give the learner a realistic idea of which mistakes are most tolerated by native speakers of their TL and which are less tolerated.

3 Description of the study

3.1 Setting up the project

The present project was set up according to the principles established by the International E-Mail Tandem Network. At the moment institutions of higher education in ten European countries collaborate within the International E-Mail Tandem Network in order to create bilingual subnets which pair students who are studying one another's native language. A Tandem Dating Agency provides each student with an e-mail partner. The matching of partners is done randomly and at an individual level. The same procedure was used in the project this paper is concerned with, simulating the International E-Mail Tandem Network's general set-up as outlined in Little and Brammerts (1996) and the network's own Internet site (to be found at the following address: <http://www.slf.ruhr-uni-bochum.de/email/idxeng00.html>). The instructions and guidelines given to students before starting the exchange were also based mainly on the information provided in Little and Brammerts (1996).

3.1.1 Subjects

In this study seven tandem pairs wrote e-mail to each other over a period of approximately three months. Each pair consisted of an English-speaking student learning Spanish and a Spanish-speaking student learning English. Four of the English-speaking students were studying Spanish as part of their undergraduate studies, two of them were attending evening classes in Spanish, and one was not at-

tending any classes but had just come back from a three-year stay in Spain and wanted to keep up her level of Spanish. Of the Spanish-speaking students, four were attending evening classes in English twice a week and three were college students of English Philology.

Of the fourteen subjects involved in this study, nine were female and five were male. Their ages ranged from 19 to 35. Their level of language proficiency in their L2 varied from low-intermediate to advanced. The students were paired randomly, with no attempt made to match ages or levels of proficiency. Table 3.1 provides a summary of background details about the subjects in this study.

Subjects	Gender	Age	L1	Proficiency level	Location
Conor	m	22	Eng	low intermediate	Dublin
Marta	f	25	Sp	advanced	Århus
Jenni	f	26	Eng	high intermediate	Dublin
Juan	m	35	Sp	advanced	Pamplona
Róisín	f	21	Eng	advanced	Dublin
Blanca	f	24	Sp	advanced	Pamplona
Rose	f	20	Eng	mid-intermediate	Dublin
Lorenzo	m	29	Sp	high intermediate	Pamplona
Ruth	f	19	Eng	low intermediate	Dublin
Ana	f	24	Sp	advanced	Århus
Tricia	f	20	Eng	advanced	Dublin
Silvia	f	23	Sp	mid-intermediate	Århus
Peter	m	27	Eng	mid-intermediate	Dublin
Pablo	m	28	Sp	advanced	Pamplona

Table 3.1 – Background information about subjects

3.1.2 Access to computers

All seven English-speaking participants were students at Trinity College, Dublin, and as a result had ready access to computers and their own e-mail account. Computer rooms in the College are very busy but all students were free to use the Centre for Language and Communication Studies (CLCS) self-access centre for language learning, where it was easier to find a computer available. Only one of the

students who had lectures on the opposite side of campus did not use the CLCS facilities, and he reported that he did not write as often as he would have liked because of the difficulty of finding a computer. All students also had access to the Internet and were encouraged to use it for their language learning.

It was more problematic to find Spanish-speaking subjects with access to e-mail. In the end I recruited three Spanish students who were taking a part of their English philology studies at the University of Århus, Denmark, within the Erasmus student exchange programme. These students were mainly concerned with improving their English during their stay abroad. All students at the University of Århus have free access to e-mail facilities and the Internet.

The remaining four Spanish students were attending evening classes at the Escuela Oficial de Idiomas de Pamplona, an official language school in the north of Spain. They shared one e-mail account coordinated by their English teacher. They each had a disk equipped with the e-mail program Eudora, so that when writing at the computer they had the same set-up and commands on the screen as all the other students involved in the project. The only difference was that they were not connected directly to the net and therefore had to put their message in queue instead of sending it. They would then give the disk to the teacher who sent the stored messages from his own personal computer connected to the net. For the two students who did not have a computer themselves, a lap-top was available for use in the language school.

Although this arrangement was not ideal, it was the best available under the conditions, and the possible impact of such an arrangement on the results of this study has been taken into account. The students who wrote the messages at home might have benefited from a quieter environment and easier access to dictionaries and reference books. However, knowing that the message was not being sent right away may have impaired the spontaneity, immediacy and direct-contact characteristics of e-mail writing. Students could not send a message whenever they wanted, or answer within minutes of receiving a message, so that the dialogical character of e-mail in this case was diminished to a certain extent. Nevertheless, it should be pointed out that the great enthusiasm these particular students showed strongly counterbalanced the negative effects this kind of arrangement may have had on their motivation. More problematic was the fact that they did not write

their messages at the computer for immediate dispatch, as the other students did. This may have made a difference as far as the writing process was concerned.

3.1.3 Informing students about the project

Before starting the exchange of e-mails, each student in Dublin was given a set of guidelines (Appendix 1) explaining what e-mail tandem writing consists of and how to derive maximum benefit from it. The guidelines make clear that messages should be written half in Spanish and half in English and explain why this should be so. They also give advice on how to correct a partner's messages and give feedback on them, and they suggest possible topics to write about and several tasks designed to take the learning benefits of the exchange one step further. Students spent approximately 40 minutes each being instructed individually on what the guidelines said and how to use the e-mail software program Eudora. Students who reported experience with e-mail were nevertheless given instructions at the computer to ensure that they knew how to use all the commands.

A letter was sent to Århus with general information about the e-mail project and who to contact if anyone was interested in participating. It was addressed to all Spanish Erasmus students at the English Department and was written in Spanish. The three students who expressed an interest in participating were then sent a similar set of guidelines to that given to the Irish students but slightly modified to meet their specific needs – e.g., the Internet address for a Spanish newspaper was replaced by the address of an Irish newspaper. They also had a contact person at the university to help them with technical problems and queries.

Students in Pamplona were informed about the project by their English teacher and those who decided to participate were sent the same guidelines as the students in Århus. They were all closely supervised by their teacher throughout the project. Communication between this teacher and the co-ordinator in Dublin was maintained during the whole period of writing, but was restricted to technical and practical questions such as problems with messages not going through or with opening attachments, or queries about vacation dates. The content of the students' messages was not discussed in these communications.

All students were asked to maintain contact with their partners for a minimum period of a month, and to write two to three messages a

week if possible. They were all told that they would be requested by the end of the month to forward to the Dublin co-ordinator three messages of their choice. It was hoped that by giving the students the right to choose which messages to forward, they would feel less conscious of taking part in a research study when writing messages to one another.

3.1.4 Difficulties encountered during correspondence

The three students in Dublin who were paired up with the students in Århus were asked to initiate the exchange by contacting their partners with a first message briefly introducing themselves. It took a long time for two of them to get started; it was some 10 to 12 days before they sent their first message, by which time the students in Århus had become tired of waiting and had stopped checking for messages on a daily basis. This further delayed the start of a continuous interaction.

Contact was quickly initiated by the students in Pamplona, so that the exchange had a smoother start for these four pairs, who soon established a more friendly relationship, resulting in longer and more elaborate messages with a wider variety of topics.

Differences in the duration of terms and the dates for breaks and holidays in Dublin, Århus and Pamplona presented serious problems, since students found it difficult to resume the exchange after a period when writing was interrupted. Students on the whole resented the breaks.

There were also several technical problems which had to be dealt with. One student had her account suddenly closed down, which resulted in her not being able to write or receive any messages for over a week. Students in Dublin saved their ingoing and outgoing messages on floppy disks. A virus affecting e-mail in the computers on campus erased a number of messages which unfortunately could not be recovered. This reduced the number of messages available for analysis from two of the pairs.

Since the students in Dublin were not attending the same courses, had different timetables and did not know each other, it was difficult to supervise the exchange closely and to assist students quickly when they ran into technical problems. The students in Pamplona were more closely monitored by their teacher, which seems to have had a positive effect on their exchanges.

All students kept in touch with their partners for a minimum of two

months, even though they had only been asked to maintain the exchange for a month. The students who then interrupted the exchange did so only because they would not have access to e-mail facilities during the summer holidays.

3.2 Data collection

After a period of approximately three months, messages were collected. Even though students had only been asked to forward three messages, many of them voluntarily forwarded more than three messages. Ten of the students (seven in Dublin and three in Århus) were interviewed. The interviews were based on a questionnaire prepared beforehand and used to structure the interviews but by no means to restrict the exchange of impressions between student and interviewer. Questions were discussed and the answers noted by the interviewer. The interviewer then added comments to the answers immediately after the interview was finished. All interviews took place in the first language of the students so that they were able to express themselves freely, and were carried out in an informal environment. In this way the students did not feel that they were the subjects of an experiment, and most of them eagerly chatted away, sometimes giving information that was not anticipated and therefore could not have been obtained by just requesting the students to answer the questionnaire in written form.

Students were also shown hard copies of the messages they had exchanged with their partners and asked to comment on them generally. Later they were asked to comment specifically on the following points: words and structures in their partners' messages which they remembered not knowing when they first read them; words or structures which they were not sure about when writing in their L2; areas in which they found it difficult to give feedback to their partners; and finally, ways in which they found the feedback given by their partners beneficial or unsatisfactory.

We have seen so far that the data central to this study were obtained by a combination of methods: collection of the product (the messages themselves), retrospection, and interviews based on questionnaires. The analysis of the product resulting from students' interactions during the exchange was complemented by retrospection. This was done with the purpose of gaining more insight into the process which took place. In order to help students reactivate the cognitive processes which took place during the writing and reading of messages, the texts were presented to them again. There was no structured eliciting procedure

to start with. Students reread the messages and commented freely on them, producing many spontaneous observations.

Some objections may be made to the method of retrospection employed in this study. The use of retrospective data is criticized by some researchers for two main reasons. The first is that the performance of subjects may be biased either by the knowledge that they will have to retrospect or by the presence of the researcher, and the second reason is that the data are incomplete and not reliable. In the present case, students did not know in advance that they would be asked to engage in retrospection. Furthermore, they were told that they would be free to choose which messages should be used in the study. This freedom was given to them in order to minimize interference with the writing of messages. As it turned out, many students decided to forward all the messages written.

Concerning the unreliability of retrospective data, I refer to the study on compensatory strategies by Poulisse, Bongaerts and Kellerman (1987) in which retrospective verbal reports were used. They found that the retrospective sessions were very informative as subjects were quite willing to provide comments partly in order to rehabilitate themselves, a fact that was also observed in the present study. They also point out that the danger of researcher bias was ruled out by the students' spontaneity. They conclude that retrospective data are a valuable resource in their study.

There is another point to take into account in relation to the use of delayed retrospection and interviews. It must be recognized that a considerable amount of time had passed between the actual exchange of some of the messages and the time of the interview. The span of time varied from days to several weeks in the case of messages which were sent at the beginning of the exchange. Concerning the questionnaires, the time delay was not a problem but rather an advantage as the students had more perspective on the exchange as a whole. In relation to the retrospection, the problem was one of administration and could not be avoided. While the time delay may have affected the retrospective data, however, it does not totally invalidate it. Cohen (1987, p.84) states that in self-observation reports (reports on specific language behaviours) "the bulk of the forgetting occurs right after the mental event. Thus, data from immediate retrospection may only be somewhat more complete than data from delayed retrospection".

The weaknesses in the data collection are taken into account in the

discussion of results in section 4. Nevertheless, it is important to put things into perspective. After all, this small qualitative study does not aim to make any definitive statements about the quality and type of learning taking place in e-mail tandem exchanges in general. Rather, the intention is to find out as much as possible about the quality and type of learning experienced by the subjects participating in this study, and then to extract some tentative conclusions which will, hopefully, suggest directions for future research.

4 Results

Results in this study are drawn from three different sources: an analysis of the messages themselves, which provides information on the product of the exchange; the retrospection, which provides an insight into the learning process during the exchange; and finally, the questionnaires, which provide information about the exchange from the subjects' point of view.

Several areas are described as they occur within the e-mail tandem exchanges of the seven student pairs in this study. The names of the subjects have been changed but extracts from messages have been preserved in their original form.

4.1 Choice of language

Students were told to write half their messages in Spanish and half in English so that both individuals in each pair would have a chance to write and read in their target language. This was stressed to them several times during the face-to-face instruction, and also in the set of guidelines and letters which they were given. Despite the emphasis given to this bilingual principle during the instruction period, most students did not follow the advice. The percentage of English and Spanish words for each pair in Table 4.1 shows that there is a nearly equal distribution of Spanish and English for four of the pairs. However, when we examine in the same table the percentage written in Spanish and in English by either partner, the figures show otherwise.

On the basis of their collective output, the table shows that Róisín and Blanca wrote 51.95% in English and 48.04% in Spanish. The individual output figures, however, show that Róisín wrote 4.68% in English, her mother tongue, and 95.31% in Spanish, while the inverse is true for Blanca who wrote 84.9% in English and 15.09% in Spanish. In

Pairs	No. of mails	No. of words	% Eng words	% Sp words	No. of mails	No. of words	% Eng words	% Sp words
Conor	5	1882	92.55	7.44	2	663	96.22	3.77
Marta					3	948	89.97	10.02
Jenni	10	3431	67.96	32.03	5	1562	61.20	38.79
Juan					5	1869	73.62	26.37
Róisín	8	1507	51.95	48.04	4	619	4.68	95.31
Blanca					4	888	84.90	15.09
Rose	4	620	47.74	52.25	2	324	0.00	100.00
Lorenzo					2	296	100.00	0.00
Ruth	7	904	48.67	51.32	5	506	8.30	91.69
Ana					2	398	100.00	0.00
Tricia	6	776	77.70	22.29	3	200	13.50	86.50
Silvia					3	576	100.00	0.00
Peter	5	5489	52.96	47.03	2	2148	53.77	46.22
Pablo					3	3341	52.43	47.56

Table 4.1 – Choice of language

the pairs Rose/Lorenzo and Ruth/Ana, the English-speaking subjects wrote 100% of their messages in Spanish and the Spanish-speaking subjects wrote 100% of their messages in English. These students seemed eager to practise their target language and underestimated the potential benefits of reading real samples of this same target language in their partner's writing. At the time of the interview, after they had been writing for a period of approximately three months, they all agreed that it would be better to write 50/50 in both languages in the future. The fourth pair showing equal language proportions were Peter and Pablo who chose to write two versions of each message, one in Spanish and one in English, following Pablo's suggestion. They were both happy with the arrangement and did not want to modify it.

Tricia and Silvia follow the same broad pattern as the first three pairs described; Silvia wrote 100% in English and Tricia wrote 13.5% in English and 86.5% in Spanish. Since Silvia wrote longer messages than Tricia and had a total word output which more than doubled Tricia's, the joint result is 77.7% in English and 22.29% in Spanish.

Conor and Marta yield a total of 92.55% in English and 7.44% in Spanish. There is a high percentage of English, which also holds for the individual output figures of 96.22% (Conor) and 89.97% (Marta). In this case, even though the exchange began by following the instructions given for 50/50 use of both languages, there was a problem of difference in levels of language proficiency. Marta's English was considerably better than Conor's Spanish, and this fact intimidated him so much that he stopped writing in Spanish altogether and the exchange became monolingual.

Jenni and Juan wrote both English and Spanish in all messages. They both wrote a higher percentage of English than of Spanish – 61.2% (Jenni) and 73.62% (Juan). This may have been because Juan's level of English was somewhat higher than Jenni's level of Spanish, although the difference in percentage use is not as extreme as with Conor and Marta. Jenni reported that she made an effort to write in Spanish each time but felt more comfortable writing in English, whereas Juan was very eager to practise his English. Nevertheless, Jenni and Juan appear to be the only pair who naturally found an appropriate balance in the use of Spanish and English. Significantly, their exchange appears to be the most fruitful on both the language learning and friendship levels.

4.2 Type of language used

The register used was fairly informal in both English and Spanish. Students mostly utilized everyday conversational language and resorted quite often to exclamation marks and inverted commas to compensate for the missing intonation in their use of language. Examples of this are the following:

> Pues lo siento pero es la hora para volver a la bibliotaca para terminar mi trabajo, que aburrioso!!!!!!!!!!!
> (*Well, I'm sorry but it's time to go back to the library to finish my work, what a bore!!!!!!!!!!!*)

Many particles and discourse fillers typically related to informal spoken language: the English *well* and *oops* or the Spanish *bueno, pues* and *ah* are often found in the messages. In the following examples particles of this kind and informal expressions which usually occur in spoken language are printed in bold.

> **Bueno**, de momento se que eres irlandes, que tienes veintiun anos, que estudias fisicas, que eres de Kilkenny **(¿Donde esta eso?)** pero vives en Dublin. **¿Que mas?**
> (*So, for the moment I know that you are Irish, that you are twenty-one years old, that you study physics, and that you are from Kilkenny (Where's that?) but you live in Dublin. What else?)*

> **What's up?**
> Sorry for not writing lately, I've been quite busy taking good care of my social life.

> **Well,** actually I didn't have too much text to correct ...
> **oops!**

> **Take it easy.**
> **See ya**

> **Hi again!**
> **So,** I surprised you with my wide vocabulary ... **Well**, I have another theory for the use of **"fancy"** words by foreigners ...

> **Bueno tengo que marcharme**. Manana te escribo algo mas.
> (*Well, I have to get going. I'll write more tomorrow.*)

> **Ah! Un tema con el que** tienes que tener bastante cuidado es...
> (*Oh! Something you should be quite careful about is...*)

It is not surprising to find expressions of this kind since they are a

common feature of the type of language used in e-mail. More interesting is the fact that, despite the informal register, subjects appeared to remain aware that they were writing to non-native speakers and therefore tried to use simple constructions and avoided local slang words. One of the subjects (Peter) reported the following:

> it [the exchange] made me think about what's casual and what's formal, also about how language works. I tried to think of neutral expressions and avoid the Irish.

It seems here that the type of modified input and the communication strategies which occur in foreigner talk (Tarone 1980) also take place in e-mail tandem interaction, and help to enhance TL comprehension and prompt correct use of this same TL (Chaudron 1983).

4.3 Cultural exchange

One factor in e-mail tandem exchanges which is often noted in the literature is the cultural exchange that is bound to take place when two individuals from different cultural backgrounds write to each other. It is difficult to define precisely which topics contribute to a cultural exchange and which do not. I have measured the percentage of words concerned with topics which overtly supply subjects with information about their partner's culture, and the number of instances in which these words occur (Table 4.2). In addition, there are many comments about subjects' personal lives from which partners can gain a better understanding of the target language culture.

Pairs	Conor Marta	Jenni Juan	Róisín Blanca	Rose Lorenzo	Ruth Ana	Tricia Silvia	Peter Pablo
% words	5.2	6.6	22.09	0	0	18.04	27.6
Instances	1	5	2	0	0	1	4

Table 4.2. Cultural exchange

The pair with the highest percentage of words related to cultural exchange were Róisín and Blanca. They followed a suggested topic from the guidelines provided and told each other about the political

and linguistic situation in the areas in which they lived, Ireland and Navarra.

Jenni and Juan had the highest number of instances of cultural exchange, that is to say, they touched upon more topics than Róisín and Blanca, but devoted fewer words to them. Jenni and Juan wrote about their respective places of origin, Wales and Navarra. The information they exchanged on this topic was mainly about the landscape and the character of the people. They also discussed differences between the Mediterranean and British diets and even exchanged recipes.

Topics touched upon by other pairs were: traditional music; the climate, landscape and people in Galicia and the Spanish province of Córdoba; differences in climate; local festivals such as San Fermines; and differences in what young people do when going out in Dublin and Pamplona.

There are two pairs (Rose/Lorenzo and Ruth/Ana) who do not have any overt cultural exchange. Nevertheless, these pairs' messages are not totally lacking in cultural information. As I have already pointed out above, some of the personal details provided by subjects carries information which also contributes to their partner's knowledge about the target language environment. Such information helps to enlarge the individual's knowledge of the world and promôtes their ability to construct appropriate schemata in their L2 reading. Here are some examples.

Pablo (28 years old) writes the following:

> My other brothers are fifteen and thirty-one years old. The youngest study electronic and the oldest works in a cars factory. Although he has a girlfriend and he is old enough to get married, I'm not able to convince him to do it and in that way get the bedroom for myself.

This example shows that, unlike in Ireland, in Spain there is no tradition of young people moving out of the family home in their early twenties. Young people in Spain do not usually gain independence from their parents until they get married.

Peter writes the following about her sister:

> My sister Jean, who is 18, has spent a few summers in Bilbao. She has left school and is working for a year before going to the Technical College in Galway to study Hotel Managemment. (She has 'deferred' her entry into college, we say. In other words, she has already been accepted by the college, and has obtained permission to wait a year before starting. It's quite common.)

In Spain, deferring entry into college is not at all common.

4.4 Feedback

4.4.1 Different styles

Most students used the REPLY command to obtain a copy of their partner's previous message and then indicated corrections on this text by using capital letters. Tricia and Silvia put the errors into brackets, which made it easier to identify them. Róisín erased the errors when inserting the corrections, which made it difficult for her partner to remember what type of mistake she had made. Jenni and Juan inserted a new blank line under each line with a mistake, marked this new line with an (*) and wrote in the appropriate corrections.

The pairs Jenni/Juan, Conor/Marta and the subject Blanca also used the alternative method of selecting a number of mistakes and commenting on them in the main body of their messages. This method resulted in more elaborate explanations, whereas the use of the 'reply' command in some cases tended to result in isolated corrections lacking explanatory comment.

4.4.2 Quality of feedback

The following is an extract from one of Blanca's messages in which she is correcting Róisín. Lines starting with (>) belong to the message that is being answered, in this case Róisín's message.

> >Me gusta mucho los deportes.
> El sustantivo "deportes" es plural y tiene que concordar con el verbo que también tiene que ir en plural. Por lo tanto habría que decir "Me gustan mucho los deportes".
> *(The noun "deportes" is plural and has to agree with the verb which should also be in the plural form. Therefore it should be "Me gustan mucho los deportes".)*
>
> >Me gusta escuchar la música.
> Cuando se trata de hablar de aficiones en general no utilizamos el artículo. Diríamos "escuchar música".
> *(When we are dealing with hobbies we don't usually use the article. We would say "escuchar música".)*

Blanca supports her corrections with clear and detailed explanations using various metalinguistic terms. Her partner, however, only points out mistakes but does not clarify why they are wrong. The following example is from Róisín's corrections to Blanca's text where she

reproduces the entire text using the REPLY command:

>I have just received your message and, although I have not time now to write you a long letter i am going to correct you some mistakes.
Some mistakes FOR YOU

The following is an extract from Tricia's correction of a message written by Silvia.

>Now I woul like to tell you that your spanish is very good. I'm
>impressed: 'me lo pase bomba'. I have only found (a)ONE mistake
>(that)WHICH I have corrected in capitals.

Tricia does not clarify why Silvia's mistakes are wrong. At the interview Silvia claimed to be satisfied with Tricia's corrections but during the retrospection on the messages she was often unable to provide corrections or explanations for her own mistakes. In the area of vocabulary and new expressions, Tricia provided alternatives to whole phrases and was sensitive to register. Silvia clearly benefited from Tricia's feedback in this area. Her English grammar, however, does not seem to have benefited from Tricia's feedback, although the feedback did draw her attention to errors and in a few cases prompted her to look for an explanation elsewhere

Peter and Pablo were the pair who made the most effort to correct each other. They both provided explanations for most corrections. Peter does not use metalinguistic terms but has an intuitive knowledge of English grammar which is reflected in his corrections. Most of Peter's corrections are at word level and he overlooks several problems in register and transfer in expressions. In the following example of Pablo's writing, Peter only adds the missing pronoun even though Pablo has requested a confirmation for the expression by typing '(?)' at the end of the sentence:

>(IT) Is incredible as I talk and talk! (?)

Pablo is more sensitive to register and uses metalinguistic terms in his corrections. He also makes more corrections beyond word level by rephrasing many of Peter's phrases.

>No se lo que va a hacer, y creo que ello no sabe tambien. (Y CREO QUE EL TAMPOCO – CUANDO ES NEGATIVO ES TAMPOCO EN VEZ DE TAMBIEN)
(>I don't know what he's going to do, and I think it doesn't know too.

(AND I THINK HE DOESN'T KNOW EITHER – WHEN IT IS NEGATIVE YOU USE EITHER INSTEAD OF TOO))

In general it is more usual for words to be corrected than whole constructions or expressions. There was a total of 183 instances of corrections in all the messages analysed in this study. Only 23% of them were corrections made beyond word level, and these all occurred in three of the seven pairs: Jenni/Juan, Peter/Pablo and Tricia/Silvia.

4.5 Development of awareness

One of the most salient aspects of the results from this study was the development of awareness which the exchange prompted in regard to both language use and the language learning process. The questionnaire contained no single question specifically designed to elicit information about increases in awareness. However, students responded to questions such as *Has the exchange helped you in your studies? How?* or *Did you enjoy the exchange? Mention positive aspects*, with observations on how the exchange had "made" or "forced" them to think about some aspect of language or the language learning process. The analysis of the messages also yielded instances of conversation on metalanguage and learning awareness. Table 4.3 indicates the percentage of words in each exchange which were devoted to comments on language and language learning.

Pairs	Conor Marta	Jenni Juan	Róisín Bianca	Rose Lorenzo	Ruth Ana	Tricia Silvia	Peter Pablo
Total number of words	1882	3431	1507	620	904	776	5489
% words language awareness	17.63	9.52	11.33	0.00	1.88	1.28	6.52
% words learning awareness	11.58	9.00	12.14	11.12	10.39	20.23	11.89

Table 4.3 – Language and learning awareness

4.5.1 Language awareness

The subjects' development of language awareness in an e-mail tandem exchange is due to a large extent to the feedback component. My first assumption was that students would see correcting their partners as a trade-off for the benefits of having their own texts corrected. Surprisingly, subjects' attitudes towards giving feedback were unanimously positive. In the interviews the questions on giving feedback to partners aroused a greater number of comments than the questions on receiving feedback. Several students found that the feedback received was sometimes unclear or unnecessary. However, all subjects who had given feedback to their partners felt that it was correcting their partners' writing that had most forced them to reflect on their own L2 learning, and to consider their use of literal translations from their L1, and their choice of vocabulary and appropriate degree of formality. The following are extracts from subjects' responses during the interviews concerning language awareness.

Conor: Giving feedback was easy but I still needed to think twice. It was helpful for my own learning.

Tricia: Her expressions and literal translations made me think of the Spanish equivalents. It made me think whether I make similar mistakes.

Silvia: It has made me think and focus more on my own errors.

Peter: It made me think about what is casual and what is formal. It made me think about how language works.

Some subjects also commented on the fact that correcting their partners had raised their awareness of their first language which had improved their skills in situations where they had been required to make a contrastive analysis of the two languages:

Marta: Correcting my partner's Spanish made me think of my own Spanish.

Róisín: Sometimes it is difficult to tell if something is right or wrong. It makes you think about English and be more aware of English grammar when translating. I found it useful for my course in contrastive studies of English and Spanish.

From the analysis of the messages it becomes clear that there are two main types of comments about language which occur in subjects' writing. These two types of comments show evidence of linguistic

awareness and metalinguistic awareness as defined by Olson (1991). According to Olson, linguistic awareness makes language an object of reflection without the use of a metalanguage. Metalinguistic awareness, on the other hand, makes use of a metalanguage. Olson applies this distinction to a discussion of literacy and metalinguistics. My purpose in drawing on the linguistic/metalinguistic distinction here is to aid the study of L2 grammar acquisition in e-mail tandem exchanges. The results of this project strongly suggest that there was a growth in some subjects' language awareness.

A further question to consider is whether this development of language awareness occurs in explicit or implicit mode. In Table 4.4, the percentage of words relating to linguistic and metalinguistic awareness is indicated. The lower percentage of words relating to metalinguistic awareness seems to point to a predominance of implicit grammatical knowledge. This is probably so because native speakers are not always equipped with the metalanguage necessary to discuss grammar rules in an explicit way, and may thus tend to explain corrections on the basis of their intuitive knowledge of L1 grammar. We must remember, however, the limited scope of this study and acknowledge that a quantitative study would be necessary to carry out more research in this area.

Pairs	Conor Marta	Jenni Juan	Róisín Blanca	Rose Lorenzo	Ruth Ana	Tricia Silvia	Peter Pablo
% words linguistic awareness	15.35	8.08	6.56	0	1.88	1.28	5.52
% words metalinguistic awareness	2.28	8.08	6.56	0	1.88	1.28	5.52

Table 4.4 – Language awareness

4.5.2 Learning awareness

Awareness of the learning process is noticeable in all messages. There is a constant dialogue between tandem partners about how to carry out the exchange in the most profitable way for their language

learning. There are also numerous requests for help with specific areas. Some examples are the following:

> Escribi las faltas en letras grandes tambien, y deje las palabras,las que no hacen falta en ingles, entre 'brackets', porque es facil olvidar lo que hemos escrito.
> *(I have written the mistakes in capital letters and left the words in English which are not necessary in brackets because we could easily forget what we had written)*

In this example the subject (Tricia) not only informs her partner about how she is correcting the text but she also gives a reason for the method employed. The argument in support of the method employed shows that some reflection on the learning process has taken place.

> Por favor, corrígeme sin piedad. Yo así lo hare. No sólo los errores gramaticales sino rehaciendo frases o expresiones mas correctas o precisas. (Juan).
> *(Please, correct me mercilessly. I'll do the same. Not only grammatical errors but also rephrasing sentences and expressions which are more correct or precise)*

> I have one request; could you write some of your message in Spanish. That way I will have at least some contact with the language. Soon I will make an effort to learn again, when things become less stressful. (Conor).

In these two examples, the requests are supported by a reflection on why the request is made. In the following extracts Peter and Pablo discuss how much they should write in each language and the use of orthographic accents in Spanish.

> About your comment of writing the first letter in English and Spanish, I think is better writing all the messages in both languages. So, we can learn daily (usual) expressions, because perhaps we learn a rather formal language at the school. Besides, it helps us in some occasions to understand what we mean. Although is a larger job, correct the answer and write the new twice, I think, is worthy.
> In relation to don't write accents, I don't mind if you do or not, but I think you can take a bad habit difficult to correct. A lot of Spanish people who didn't take care about accents when they had to, now have difficulty or they don't know when to write them. (Pablo)

> I think you're right about writing all our letters in both English and Spanish. In relation to accents, I agree that they are very important,

but I think that I understand quite well where to use them, and as I said, it's very difficult to write them with my computer. (It's a UNIX workstation.) [Peter]

Subjects often reflected on their difficulties and how to overcome them. In the following example Blanca and Róisín tell each other about their weakest points in their respective L2.

This is another difficult area in English cause, sometimes, you do not remember some phrasal verbs, just the ones you use a lot and, finally, you go on writing and talking wwith a reduce vocabulary. Is it the same for you in Spanish? [Blanca]

Yo tengo muchos problemas con el espanol, especialmente con el uso del subjuntivo porque como sabes no lo tenemos en ingles - por eso es muy dificil saber cuando se usa y cuando no. Tambien tengo la tendencia de usar unas palabras que en efecto no existen en espanol pero que vienen de frances y que son muy parecidas a las palabras espanoles. [Róisín]
(I have many problems with my Spanish, specially with the use of the subjunctive because, as you already know, we don't have it in English - that's why it's very difficult to know when to use it or not. I also have a tendency to use words which don't actually exist in Spanish but which come from French and are very similar to Spanish words.)

Other examples are the following:

Personally, I pay special attention when you use expressions and adjectives. [Juan]

I have been lazy in learning Spanish, but this exchange will encourage me to learn more. [Conor]

Thank you very much for correcting my mistakes. I can usually comunicate quite okay but since most of people understand me, noone bothers to correct my mistakes, so please be as picky as you can. [Marta]

The dual role of native speaker/learner that partners play seems to stimulate many comments about the language learning process and raise awareness in relation to specific problems.

4.6 Writing

In this section I refer to the actual process of writing in the exchanges. Most of the data presented were obtained from the interviews

and retrospection. It is difficult to draw a clear dividing line between writing skills and composing skills when looking at the process rather than the product. Some of the skills involved overlap and therefore some of the points outlined under section 4.6.1 (composing skills) are relevant also to the e-mail writing process. They are discussed here in relation to composition writing, since it is in this area that most research on the writing process has been conducted.

Table 4.5 shows a great difference in the volume of words written by subjects. The mean number of words for four of the pairs ranged from 129 to 188. These messages were short and casual. Topics were only touched upon superficially. There was little negotiation of meaning, which is a feature that also applies to the other pairs. Students are very tactful in their interaction with their partners and are very careful not to offend or contradict them. Two pairs wrote an average of 343/376 words per message and elaborated more on topics. Finally, there was a pair who wrote an average of 1,098 words. This pair wrote longer messages and less frequently than the others (every two weeks). As a result, they approached the e-mail writing in a similar way to letter writing. They made more explicit introductions to a topic and expanded upon them more. Interestingly enough, three of the pairs who wrote longest messages had a student from Pamplona as the Spanish-speaking member. These students could not send their messages themselves but delivered a disk with the message to their teacher who would then send it later. This may have reduced their sense of the immediacy and spontaneity of the exchange, and encouraged them to write more elaborated messages.

When students were asked at the interviews to identify the ways in which composition writing differed from e-mail writing, they referred to the spontaneity of the interaction, a lesser concern with structure and correctness, a more colloquial use of language, and more interesting topics.

To sum up, these results suggest that both the product and the process of writing differ depending on the length of messages and frequency of writing. Nevertheless, there is a general tendency towards a looser textual organization and spontaneous use of language. Further research on the process of writing in e-mail exchanges should include the observation of students while writing, and protocol analysis or retrospection immediately after the writing has taken place.

Pairs	Conor Marta	Jenni Juan	Róisín Blanca	Rose Lorenzo	Ruth Ana	Tricia Silvia	Peter Pablo
Total number of words	1882	3431	1507	620	904	776	5489
Average number of words per message	376	343	188	155	129	129	1098

Table 4.5 – Number of words written by each pair

4.6.1 Composing skills

The information in table 4.6. was obtained from the interviews and for this reason there are only ten subjects in the table. However, in relation to whether students wrote messages directly at the computer (first data column in table 4.6), the answer is yes for all four-

Subjects	Typed at computer	Used reference books	Average time spent on each message	Several drafts/ extended revision	More attention paid to meaning or form	Printed out messages
Ruth	✓	x	20 min.	No	meaning	No
Ana	✓	x	15 min.	No	form	No
Conor	✓	✓	45 min.	No	meaning	No
Marta	✓	✓	30-60 min.	No	meaning	Yes
Tricia	✓	x	30 min.	No	both	No
Silvia	✓	x	30-45 min.	Yes (revision)	meaning	No
Róisín	✓	x	20-30 min.	Yes (revision)	meaning	No
Rose	✓	x	30 min.	No	meaning	No
Jenni	✓	x	30 min.	No	form	No
Peter	✓	✓	2 hours	Yes (revision)	form	Yes

Table 4.6 – How subjects composed their e-mail messages

teen subjects. The information here for the four students who were not interviewed was provided by their teacher in Pamplona. It is clear then that this section must be discussed in the light of recent studies exploring the effects of word processors and computers on composition writing. Such studies have already been reviewed in section 2.4.

The question of multiple draft writing and revision is closely linked with the fact that students wrote at a computer. In this study none of the students wrote different drafts and only three students reported doing extended revision after completing a message. From the interviews it became clear that the general practice had been intensive planning and reviewing on-line, and final editing at a surface level. Little pre-planning was done and, if so, only in the writer's mind, without the aid of graphic methods or the like. Most subjects preferred to be spontaneous and engaged in the task with no planned agenda other than responding to any comments or questions in the last received message. This is also reflected by the fact that students did not equip themselves with reference books when writing their e-mail messages. Of course, the environment in which they wrote (computer rooms in college) did not facilitate access to reference books. Of the three students who reported using reference books, two (Peter and Marta) were the only subjects who printed out their messages. One of the reasons they did so was to be able to consult reference books with ease. Of the five students in Dublin who regularly used the computers in the self-access language centre, none made use of reference books available at the language centre. The fact that Peter and Marta are both postgraduate students who have already achieved a high degree of learner autonomy may partly account for their use of printing facilities and reference books to take their learning through the e-mail exchange one step further. Another reason for Peter's behaviour may be the different approach to writing that he and his partner Pablo took, which has already been discussed above.

Concerning textual coherence, I have already pointed out that many messages were short, touching upon various topics and following a conversational rather than a discursive pattern. In short messages there is no attempt to organize ideas in coherent paragraphs. When the span of time between messages is brief, topics do not need to be introduced explicitly and are sometimes introduced by simply pasting an extract of the message which is being answered. The following example is from a message written by Conor:

>It was really good the use of ser and estar because these are verbs
>quite confusing for foreigners. Congratulations!!

Thank you for the positive encouragement.

>I'll try to write more often from now on and will tell you a lot more
>things about my life.

I look forward to the pleasure.

Subjects often assign a new paragraph to each new idea. As regards the organization of the text as a whole, it is not the same as it would be in a composition discussing various views or aspects of a specific topic, but there is still an attempt to lead the speaker from one topic to another. This brings us to an aspect of writing composition which is definitely fostered by e-mail writing: reader awareness. Here are two examples where the writers carefully point out to the reader the direction their discourse is taking. The first one is a message written by Lorenzo in which he uses connectors such as *finally*. The second example (written by Juan) achieves the same effect by other less explicit means:

Hello again Rose.

I didn´t know you was going to Madrid. Anyway, I hope you enjoy a lot in Madrid. It´s a marvellous oportunity of improving your Spanish. Don´t frustate if the Spaniards speak very quickly. When I was in London, the first week for me was absolutely impossible to understand anything.

Well, **as you know** I speak a little bit of French, and I take note of you mix French and Spanish. Never mind, and forget the accents by this time. Well, **in the second place**, I have seen "Sleepers" and "Daylight" but I enjoyed a lot watching the first one, but not the second film. The last film I´ve seen it´s "The English patient". It´s very slow but it was fine. This week I am going to see "Michael Collins". Have you seen it?. I suppose so, because it´s about Ireland history.

Finally, I hope you enjoy a lot in Madrid, and write me as soon as you can.

I´ll see you.

Pd: Have you been before in Spain ?

Hi Jenni!

Don't think I'm forgotten you. You've been in my mind during the week every day, but I've been so busy because of the short course I'm doing that I haven't be able to sit down and write. That's why I decided to stay home and work today, a sunny Sunday morning, instead of going to the mountain with my family and the mountain group of my

daughter's school.

You told me that you were going to the doctor, I wish you were O.K. again.

What about correcting some mistakes? If you have never written in Spanish,of course it would be rather difficult to you, but sure you'll get better! (Juan)

In the interview, when asked about the differences between writing composition and writing e-mail tandem, Tricia said the following:

You have to think about whether what you are writing will be interesting, if it makes sense.

We can conclude that e-mail tandem learning has a positive effect in developing the learner's awareness of the intended readership of a given text. Therefore, we can say that e-mail tandem writing encourages students to move towards reader-based prose. On the question of topic, e-mail tandem writing allows students to choose topics of their own interest which in turn results in a positive psychological incentive for writing.

4.6.2 Communication strategies

This section outlines examples of several communication strategies used by subjects in the messages. There is no attempt to quantify the strategies since the information was obtained by means of delayed introspection. My intention is simply to show instances of communication strategies in the messages with the purpose of exploring the development of strategic competence in e-mail tandem writing, and to suggest directions for further research in this area.

On the question of degree of risk-taking, students reported that they were more willing to take risks because the messages were not going to be marked by a teacher. Another factor contributing to the increase in risk-taking may have been the context in which messages were written: students sat in computer rooms writing directly at the computer, with no reference books at hand (see table 4.7), and with the intention of sending the message immediately after writing it. The fact that messages were sent straight away in their electronic format and were hardly ever printed out in hard copy (see table 4.7.) may have reduced their sense of permanence which in turn may have encouraged risk-taking. Another possible influence on a student's willingness to take risks when using the target language is the fact that the reader of the mes-

sages is also a learner and may therefore be more understanding concerning language errors.

Having said this, it is important to note that avoidance also took place. One subject reported that she was aware of using avoidance strategies when writing and occasionally avoided topics altogether because of the difficulty they presented. Code switching occurred as a device to maintain the flow of language and request the equivalent term in the L2. However, instances are rare compared to the use of a construction or word in the L2 accompanied by a question mark to signal that the writer is unsure whether the construction is correct. The following are some examples of both devices. The words in bold face are the ones which students did not know or were unsure about:

> As I know that your PC hasn't got <**tildes**>, I'll put them while I type your message. (Juan)
>
> Estoy trabajando mucho estos dias – he hecho un papel hay dos mas- el "**deadline**" es en tres semanas. (Jenni)
> (*I'm working a lot these days – I've done one paper and there are two more- the "deadline" is in three weeks.*)
>
> **En segundo, unas informaciones de mi** (?). (Peter)
> (*Secondly, more information about me.*)
>
> **Estudie** (**estudiaba**?) el Espanol por seis anos. (Peter)
> (*I studied Spanish for six years.*)

In short, it seems that students resorted less to code-switching in favour of taking risks by experimenting with language, and signalling their request for corrective feedback for these attempts through the use of question marks in parentheses.

There are many examples of language transfer, not only from English to Spanish or vice versa but also from other languages students may be studying, especially in the messages produced by those students in Dublin who were studying a third language as part of their undergraduate programme of studies. The following examples are instances of transfer involving English and Spanish:

> **Pues,** hasta pronto (Róisín)
> (***Well,** see you soon*)
> I could speak about my village **during** hours because **the nostalgy that in these moment I feel.** (Silvia)

The following example is an instance of transfer from French, a lan-

guage Rose was also learning. She uses the French word *ordinateur* (computer) and conveys her message successfully since the Spanish word for computer (*ordenador*) is close to the French:

> Se que no escribio con accentos pero no se como hacerles en la ordinateur.
> *(I know I'm not writing with accents but I don't know how to type them in the* ***computer****)*

4.7 Subjects' comments and attitudes

4.7.1 Perceived areas of improvement

During the interviews students were asked which areas of their language proficiency had improved most as a result of the e-mail tandem exchange, and which areas of knowledge or understanding related to language use had benefited. For students who felt unsure how to answer the question, the following six areas were suggested as possible answers: *grammar, writing fluency, new vocabulary and expressions, reading, culture information* and *friendship with a person belonging to the TL community.* The results are shown in table 4.7, to which another area has been added: *thinking about language.* This factor was not prompted by the interviewer but was spontaneously reported by seven of the ten interviewed subjects as an area which improved significantly through the e-mail tandem exchange.

The areas of *thinking about language, writing fluency* and *new vocabulary and expressions* were those in which most students (seven out of ten) reported improvement. With regard to *writing fluency*, the three subjects who did not feel they had improved were Marta, Tricia and Rose. In the cases of Marta and Tricia the reason may be that their level of L2 proficiency was considerably higher than their tandem partner's level of L2 proficiency. Before starting the exchange, Marta was already very fluent in her writing and had a high level of grammatical competence. This may account for the fact that the only improvements in language proficiency she reports are in relation to acquiring new vocabulary and expressions. She also reports improvement in the other areas relating to language learning, cultural information, friendship and thinking about language. Tricia did not build up a good rapport with her partner, and as a result their exchange consisted of short messages only. This may be why she felt that her already good writing fluency did not improve. On the other hand, for her partner Silvia, the short

	Grammar	Writing fluency	New vocabulary	Reading	Cultural information	Friendship	Thinking about language
Ruth		✓	✓				
Ana		✓				✓	✓
Conor		✓	✓			✓	✓
Marta			✓		✓	✓	✓
Tricia	✓			✓	✓		✓
Silvia	✓	✓	✓	✓			✓
Róisín	✓	✓	✓		✓	✓	✓
Rose			✓	✓	✓		
Jenni	✓	✓				✓	
Peter	✓	✓	✓	✓			✓

Table 4.7 – Areas in which the exchange was felt to be most beneficial

messages acted as a scaffold to help improve her poor writing fluency.

In the area of *new vocabulary and expressions*, two of the three subjects who did not report an improvement had failed to maintain an equal balance between the languages used in messages; they did not receive any messages written in their TL. The third subject had learnt her L2 in a naturalistic setting and had thus already acquired a variety of register similar to the register used in the e-mail tandem exchange.

In the area of *grammar*, there is a close correlation between the quantity of feedback and corrections made and the degree of grammar improvement reported. The five subjects who did not feel their L2 grammar had improved had either not exchanged corrections with their partners at all (Rose) or had exchanged only a few corrections (Ruth, Ana, Conor and Marta). Of the five subjects who felt the exchange had greatly developed their L2 grammar, four belonged to the pairs in which the most number of corrections had been made and in which corrections beyond word level had taken place.

As far as *friendship* is concerned, it is interesting to observe that the success of the exchange did not necessarily imply the development of a friendship. In the case of Peter and Pablo, long messages and benefi-

cial feedback were exchanged but Peter did not feel a friendship had developed. He reported merely using his partner for the purpose of improving his L2.

Knowing the areas in which subjects felt themselves to have improved is helpful in understanding the exchange from the subjects' point of view and may point to interesting areas to be explored. It may also be helpful for identifying different personal approaches to the exchange. However, it must be remembered that this kind of information is purely subjective and can be easily influenced by how the interview develops, the students' preconceptions of what language learning consists of or their willingness to please the co-ordinator of the exchange. This becomes clear when analysing the response towards *reading*. Of the four subjects who felt their reading skills had improved, two of them did not receive any messages to read in their TL. It is thus important to be cautious in drawing any conclusions from the information above other than possible support for data obtained by other methods.

4.7.2 Negative comments

There were four main complaints made by students:

- **Topic of conversation.** There were two pairs who did not fully succeed in building a good rapport. In these cases "conversation" did not flow naturally and the subjects had difficulties in finding topics to write about. It is not easy to determine whether some support in providing topics at the beginning of the exchange could have solved the problem. In any case it becomes clear that it is necessary to monitor exchanges closely in the initial period, in order to suggest topics and activities or, if necessary, to arrange for students to get in touch with new partners.
- **Synchronous versus asynchronous communication.** Two students reported that they would have preferred to be involved in synchronous communication. Synchronous communication via the Internet seems to be an attractive new mode of communication. In terms of language learning; however, it is not an alternative to asynchronous writing, but might rather act as a complement as it would develop different skills from those involved in e-mail tandem writing. This is an area which will need further research as the technology for synchronous communication via the Internet develops.
- **Level of proficiency.** A considerable difference between partners'

L2 proficiency levels may cause problems, as has already been mentioned in section 4.1 in relation to students' choice of language for e-mail writing. The results of the present study suggest that subjects benefit most when paired with subjects of a roughly equivalent level of L2 proficiency. The question of whether there is a threshold proficiency level that is a prerequisite for success in e-mail tandem learning remains an issue for research.

- **Frequency of writing.** Three students felt that their tandem partners did not write often enough and three students in different pairs admitted that they would need some type of pressure in order to write more frequently, since other curricular and work activities took priority over the exchange at certain times. This leads to the question of whether it would be more beneficial to integrate the exchange within a classroom framework with the purpose of supplying students with extrinsic motivation. Of the ten students interviewed, five were in favour of this option in order to solve the "laziness" problem. The other five students were opposed to the idea of making e-mail tandem writing a coursework obligation since they valued the "voluntary" character of the activity.

4.7.3 Positive comments

When asked if they had enjoyed the exchange, all students interviewed responded affirmatively. The teacher in Pamplona reported that all of his four students also showed a very positive response to the exchange. When asked to mention positive aspects of the e-mail exchange the following points were made:

- "meeting" a new person
- frequent contact with real life in a TL country
- cultural exchange
- use of everyday language
- dealing with aspects of the language you are interested in
- rise in language awareness

This last point was present in all students' responses. Comments such as "it makes you think about ..." or "it forces you to think" occurred repeatedly during the interviews (cf. earlier discussion on language awareness in section 4.5.1).

4.8 Conclusion

In this section I have described a study carried out to explore e-mail tandem learning and its results. I have also pointed out certain

weaknesses in the study which should be taken into account in the discussion of the results in section 5.

From the analysis of the results it becomes clear that the e-mail tandem exchanges had an important impact on raising awareness, in terms of both language awareness and learning awareness. The percentage of Spanish and English used in each message seems to have had an effect on the success of the exchange. The pairs who used both languages in equal measure built a better rapport and were also the subjects who reported the greatest benefit. Similarity in corresponding levels of L2 proficiency also played a role in the success of the exchange. The analysis of feedback suggested that students profited equally if not more from giving as well as receiving feedback. Another important observation is that e-mail tandem learning encourages risk-taking in writing.

Other areas which have been discussed are cultural exchange, both explicit and implicit, the informal language register used by subjects, and the influence of e-mail tandem writing on composing skills. Although the messages were loosely structured, they showed evidence of reader awareness development and reviewing processes.

Some pairs benefited more from the exchange than others but on the whole all students had a very positive attitude. They also expressed a wish to maintain the exchange with their tandem partners beyond the minimum period of time they had been asked to write for. In the following section I will discuss the results presented here and their significance in relation to the learning process.

5 Discussion

This section begins with an account of how each tandem pair dealt with the e-mail exchange and the language learning which resulted in each case. Next, the results obtained from the e-mail tandem case study and presented in section 4 are discussed in general, in relation to the following three questions:

1. In which areas do students benefit most from the exchange?
2. How can the benefits in these areas be maximized or extended to other areas?
3. What kind of support is it necessary to give to students who are involved in an e-mail tandem exchange?

In order to make productive use of e-mail tandem exchanges, it is nec-

BEST COPY AVAILABLE

essary to know exactly what kind of learning takes place in such an environment. This kind of information is crucial for understanding, controlling, and making the most out of any language learning task.

5.1 Discussion of individual pairs

The first pair, Rose and Lorenzo, exchanged very few messages. The beginning of their correspondence was immediately interrupted by holiday breaks and subsequently the exchange never quite seemed to take off. They wrote to each other only in their respective L2 and did not correct each other even though they had been instructed to do so. This shows how important it is to supervise the exchanges closely in their initial stages, in order to ensure that breakdowns in communication are overcome and that students follow the instructions given, especially instructions regarding the balanced use of both languages and the giving of feedback. Despite the drawbacks in their exchange, Rose nevertheless reported that she had enlarged her Spanish vocabulary and knowledge of Spanish culture, and felt that she had benefited from the experience.

Ruth and Ana similarly wrote almost exclusively in their L2. In their case also, the number of potential benefits from the exchange was reduced by this fact. Messages were short and loosely structured and the students seemed to regard the exchange as more of a pen-friendship than a language learning activity. When interviewed, both students realized the shortcomings of having carried out the exchange in this manner. Closer supervision in the initial stages could have supported the development of autonomy by these two particular subjects and helped them to profit more fully from the exchange. Despite the limitations of their exchange, both Ruth and Ana felt that they had become more fluent in their L2 writing, learnt new words and expressions, and developed language awareness.

Tricia and Silvia did not succeed in establishing a rapport. This may have been due to the fact that Tricia's level of Spanish was much higher than Silvia's level of English, which may explain why Silvia reported profiting more from the exchange than Tricia did. Because of Silvia's lower level of proficiency and the fact that she wrote exclusively in her L2, her messages were short and their content was limited. As a result Tricia also replied with short messages and her interest in the exchange diminished as time passed. Silvia's overall proficiency benefited in relation to grammar, writing fluency and range of vocabulary and ex-

pressions. Tricia reported that her grammar benefited through a growth in language awareness which resulted from correcting her partner's messages, and from taking her reader into account when writing. In this instance, it is clear that the principle of reciprocity was violated, since Tricia did not receive as much help as she gave.

Conor and Marta also had the problem of a language proficiency gap. This was, however, mitigated by the fact that Conor wrote longer messages in his L1, which helped the exchange to maintain some manner of balance and run smoothly. Even so, Marta benefited more from the exchange, since a larger proportion of messages was written in her L2, English. With closer supervision this problem could have been solved by giving Conor support and impelling him to keep writing in Spanish.

Róisín and Blanca were both enthusiastic and had a very positive attitude towards the exchange from the very beginning, which may have counteracted the negative effects of their joint tendency to write significantly more in their respective L2 than in their L1. They wrote to each other frequently and the messages were relatively long in relation to the frequency with which they wrote. They exchanged a large amount of cultural information and reported a clear improvement in their writing fluency and range of vocabulary. The most salient aspect of this exchange was the strong development of language and learning awareness which was reported spontaneously by Róisín in the interview, and which is also transparent in the content of the messages.

Peter and Pablo's messages had the highest average number of words per message. This probably indicates that the exchange was taken seriously as a learning activity rather than a mere pen-pal exchange. All messages were carefully constructed and at times adopted something close to an academic style of writing. The low frequency with which they wrote meant that their exchange lacked the spontaneity characteristic of the other exchanges, and made the activity more similar to a writing or composition task in the traditional sense. The partners agreed to engage in this type of interaction and throughout the exchange they continually negotiated how to carry it out. They both made conscious choices about how the exchange should progress, according to what they judged their language learning needs to be. The give and take of feedback contributed to the raising of both language and learner awareness, although the long delays before getting replies possibly meant that it was the giving of feedback which contributed

more by making the students reflect on language.

Jenni and Juan were the pair who benefited most from the exchange. This was most probably due to the balance they achieved in the use of Spanish and English and the frequency with which they wrote to each other (twice a week), which allowed them to write messages of a suitable length. The principle of reciprocity was fulfilled in that they helped one another equally, and benefited equally from the exchange. Another important factor contributing to the success of their partnership was the degree of learner autonomy which they brought to the exchange from the beginning. From analysing Jenni and Juan's messages and Jenni's interview and retrospective data, it is clear that both learning and linguistic awareness increased, that vocabulary range and writing fluency improved, and that a beneficial cultural exchange took place. It also appears that acquisition of new grammar structures took place in an inductive way. The partners wrote a mixture of messages in which a broad range of topics were touched upon casually. In addition, on a few occasions they wrote on topics which required more elaboration and textual organization. An amiable tone was established from the beginning and developed throughout the exchange into a productive combination of friendly dialogue and profitable language exercise.

5.2 General discussion

As I mentioned at the beginning of this section, there are three main questions which I intend to address in this discussion. The answers which I have arrived at are based upon the data collected from all of the pairs, and the issues touched upon are relevant to e-mail tandem projects of all descriptions. I will look at these general questions now, with a view to formulating suggestions for maximizing the advantages of the medium.

1) In which areas do students benefit most from the exchange?

The most significant benefits seem to relate to the growth of awareness, in terms of both language awareness and learning awareness. As a direct consequence of this, learner autonomy also develops. These findings may be considered in relation to Bachman's (1990) description of communicative language ability discussed in section 2.2. His model encompasses three components: psychophysiological mechanisms, strategic competence, and language competence. Improvement in each of these areas may be assessed by looking at the following aspects of the present findings:

- **Psychophysiological mechanisms.** The findings presented here point to the need for a great deal of further research in this area, as the present study was not of a broad enough scope to deal with psychophysiological mechanisms in any depth. Such research should concentrate in particular on differences in language processing in regard to writing and speaking, where writing is defined as taking place with a computer and specifically in the environment of e-mail.
- **Strategic competence.** In the study, students were engaged in real communication with a purpose and were required to use particular strategies in order to maintain communication. In terms of reciprocity, e-mail provides a bridge between oral interaction, which is more rapid and leads to greater problems if communication breaks down (but which also allows for more on-line help from the interlocutor), and the type of written communication in which the writer is entirely on his or her own. In e-mail, feedback can be provided relatively quickly – i.e., more quickly than with non-electronic forms of writing (where feedback may in some cases never materialize), but more slowly than in conversation. More research is needed to determine exactly which communication strategies are used in e-mail writing and how they are used; e.g., the use of the question mark (?) to indicate uncertainty about a point being made is characteristic of e-mail interaction. Greater communicative risk-taking has been observed in e-mail environments, possibly prompted by the lower face-threatening potential of written in comparison with oral communication. This also warrants further investigation.

  Another aspect of the present findings related to strategic competence is the contribution of e-mail tandem exchanges to the student's knowledge of the TL culture (section 4.3 on cultural exchange), and the resulting growth in the range of culturally relevant knowledge schemata built by the student. Such schemata facilitate L2 comprehension since they enable the student to anticipate the message and confirm his or her anticipations on the basis of the input received. It may also be interesting to do more research on whether and to what extent e-mail tandem may lead learners to acquire the more common communication strategies used by native speakers of their TL. In this, an equal balance in the use of both languages in an exchange would appear to play a considerable role (section 4.1).

- **Language competence.** In regard to language competence, it is important to realize that e-mail can be utilized in many different ways, in much the same way that books or video tapes may be used for different purposes in a classroom. In e-mail tandem exchanges such as the ones in this study, there was no specific focus given to students, and developments in the following subdivisions of language competence were observed (see figure 2.1):
  Organizational competence: Development of grammar competence arises from the need to use grammar. Grammar learning occurs inductively.
  Textual competence: This type of language competence did not seem to manifest itself in terms of coherence or the rhetorical organization of a larger text (note that the e-mail exchanges were not intended to be in a formal academic style). Letters tended to jump from one topic to another, generally without much elaboration on specific topics. On a few occasions, students followed some of the topics suggested in the initial guidelines, but generally there was little or no rhetorical organization. However, this is not to say that cohesion was lacking. Students appeared to develop relatively acute reader awareness, and were therefore careful to signal topic shifts and to make clear what they were talking about.
  Pragmatic competence: In regard to illocutionary competence, students carried out a variety of functions by making requests, giving information, and describing things. It is possible that greater variety could be achieved with some direction from the co-ordinator. I will expand further upon this idea presently. In regard to sociolinguistic competence, I have already mentioned in relation to strategic competence above that students gained cultural knowledge. Information about dialects or varieties of language was not observed in the correspondence data analysed here, but it may be acquired in several ways. Subjects may either ask direct questions of the TL speaker, or the information may be acquired implicitly. A longitudinal study would be necessary to investigate this. Insofar as register is concerned, it seems clear that sensitivity to register in TL was present, owing to the presence of corrections related to register.

Another skill which showed signs of development was that of peer collaboration – i.e., the giving and receiving of feedback, which in turn contributed to increased awareness, as I have already noted. Different styles of feedback were identified and discussed in section 4.4.

In section 2.1, I introduced the types of talk between students which Mercer (1995) identifies. If we apply these to the interaction which takes place in e-mail tandem exchanges we observe the presence of cumulative talk: i.e., students respond to each other positively but uncritically. This may be due to fear of offending the partner, perhaps arising from uncertainty over cultural differences. There is a tendency towards explanatory talk, in that reasoning is often made explicit, but more constructive criticism and argumentative discussion would be desirable.

2) How can the benefits in these areas be maximized or extended to other areas?

These benefits may be maximized in a number of ways. One way would appear to be by making students aware of their own needs and goals, and of how to use the exchange to accomplish what they want to accomplish. This can be done only by orienting instruction with an emphasis on learner autonomy, as the responsibility for goal-setting is best taken by the students themselves.

A second way of maximizing the benefits of e-mail tandem is by integrating the exchange into a course programme. These first and second approaches are by no means mutually exclusive. If students were asked to complete different tasks with the help of their tandem partners, this could increase the variety of language use to which they were exposed. Such areas as register, vocabulary, functions, and organizational structures could be varied through the assignment of such tasks, which could be designed by the co-ordinator. Students could be required to do some collaborative writing. In this way some academic writing could be integrated, or indeed a variety of genres could be dealt with. Collaborating on a specific task may also promote the use of exploratory talk in that students would be forced to negotiate in order to accomplish a specific task. The medium of e-mail itself can be used for many purposes and students can be required to write to different people for a variety of reasons: e.g., requesting information from official authorities or participating in informal forums or mailing lists. In such cases, the tandem partner can act as a reference resource to be consulted where there is doubt about how to go about writing, or finding the right tone, or difficulty in understanding replies.

The possibility exists that integrating an e-mail tandem programme into a course may run the risk of taking away some of the motivation if students see it as a compulsory class activity (see section 4.7.2). I believe that setting up an e-mail tandem exchange outside the classroom

can also be very beneficial, although it needs a lot of support in its initial stages to ensure that students can learn to evaluate their needs and take action accordingly.

3) What kind of support is necessary to give to students involved in an e-mail tandem exchange?

The findings presented here argue for the importance of keeping a fairly strict half-and-half balance in the use of both languages in an exchange. Co-ordinators must make sure that students understand why this is important, and then check that the students continue to follow this guideline. It is crucial to realize that teaching a student to be autonomous does not mean leaving the student on his or her own. Students must be instructed to take charge of their own learning by identifying their own needs and making appropriate requests of their partners. It is important that partners do not become untrained teachers but qualified informants.

Students should be encouraged to make use of a printer and reference books. Printed copies enable students to review and work on the messages outside the computer centre.

It is important to make students aware of communication strategies and the existence of different types of register. Also, various exercises and activities may be assigned around the core work of the programme, such as making lists of new words, etc.

It is very important to train students in using the computer and e-mail software, and to provide students with technical support for problems, e.g., with accents or unusual characters, and compatibility problems with other e-mail systems. In this respect, a good command of the e-mail software program will also facilitate the student's task of correcting his partner's messages. Students should be able to use the commands of REPLY, FORWARD, etc., and should also know how to attach a document so that they can work with the messages using word-processor programs. In this way they would be able to take advantage of some of the commands which are not yet available in most e-mail packages, such as spelling checks or a choice of different colours to make corrections stand out.

These various means of support should be provided, preferably without interfering with the content of students' tandem work, although of course it may sometimes be helpful to make suggestions. Controlling the rapport between partners may also be important, and co-ordinators should be able to provide other partners if necessary.

6 Conclusion

In this paper, I have examined the e-mail tandem exchange as a means of foreign language learning. To this end, it has been necessary to discuss a number of theoretical issues pertinent to the language learning process which takes place in e-mail tandem interaction, and to relate these theoretical issues to the data collected by means of a qualitatively analysed case study. In this case study, seven different tandem pairs were asked to write e-mail in English and Spanish for a period of at least one month. Qualitative data were collected by means of questionnaires and interviews with the subjects. In addition, samples of the actual e-mail exchanges between subjects were also obtained. From the resultant data, two elements clearly emerged as central to the process of language learning through this type of activity – language awareness and learning awareness. The results of the present study strongly indicate that e-mail tandem writing develops and sharpens these two forms of awareness, and that they in turn foster language acquisition and the development of learner autonomy.

It has been argued that the areas of language proficiency or communicative competence which are most strongly promoted through an e-mail exchange will depend on the learner's needs, as well as the learner's attitude towards this type of exchange and the use that he or she makes of the format. The medium of e-mail and the software used for its implementation provide a number of inherent advantages which must be understood and capitalized upon if the full benefits are to be gained from the exchange. Thus it is of particular importance that students are able to exploit the advantages of the medium. In the case study this paper is concerned with, in addition to growth in linguistic awareness and learning awareness, benefits were observed in the following areas: use of grammar, vocabulary and new expressions, reading, writing fluency, knowledge and understanding of cultural differences, and the ability to give helpful peer feedback. The extent to which these skills were developed depended on each individual case. I have discussed a number of factors which appear to have contributed to the success or otherwise of each tandem partnership and the students' development of these skills. I have argued that the development of these skills may be traced to an increase in the above-mentioned forms of awareness, and that the reasons for this link are directly related to a combination of the following factors:

- The written channel is used, which permits the learner to keep a

record of the interaction and frees him from the time constraints that operate in oral communication. This aids in comprehension, allows for more elaborate and carefully thought-out production and, in general, promotes reflection on the language use which has taken place.

- Tandem collaboration is a means of exchanging feedback with a peer who is a native speaker of the TL and, at the same time, a learner. This means that he or she is likely to be more sensitive to problems inherent in language learning.
- The development of an interactive relationship between the two members of a partnership helps to maintain motivation; there is both the motivation to improve one's own language ability and the commitment to assist one's partner in improving his or her language ability.
- The speed with which messages are sent and received gives the exchange a sense of immediacy and enables learners to receive feedback within a short span of time. The results of the present study suggest that the sense of immediacy and the possibility of exchanging messages rapidly shaped the writing approach adopted by students who were working with an active e-mail system, which was different from the approach adopted by those who did not have direct access to the net.
- The language used in the exchange has an informality of register and tone which is perhaps uncommon in the language classroom in third-level education. It encourages students to feel more at ease, and strengthens their perception that the language being learned is real and genuinely useful.
- By being exposed to authentic samples of language through actual interaction in real communicative situations, students are able to put their language skills into practice in a productive way.

From the data collected in this study, one overriding conclusion to be drawn is that providing adequate support for tandem partners is vitally important, particularly in the initial stages of the exchange. The tandem co-ordinator needs to be in direct contact with the students, in order to supervise their work and help them to get their partnership off the ground. This does not mean that the co-ordinator needs to be an expert in the languages being learnt. Although this clearly may be an advantage, it is not a necessary condition. The co-ordinator's primary function is to foster learner autonomy. This is done by getting tandem learners to take charge of their own learning, and by assisting with the

technical and logistical problems of the exchange.

The results of the present study suggest that a great deal more research is necessary in a number of areas. First of all, one question to be addressed is how language is produced within the context of e-mail and how it resembles or differs from the language used in other channels, spoken and written. This must be investigated in order to shed light upon whether the skills acquired in tandem language learning via e-mail are transferable to the spoken channel.

Another area which should be investigated further is the possibility of making e-mail software more "e-mail tandem friendly" – i.e., making available all the features of current word-processors. Useful software for conducting further research into e-mail tandem exchanges could also be designed. Such software might enable the researcher, for example, to check the relative proportions of L1 and L2 use in messages without interfering with the content (i.e., without reading the content), or to count how often specific words used by the native speaker are subsequently recycled in the learner's messages. This might lead to some interesting research exploring the extent to which the modality and style of the native speaker are transferred to the non-native speaker during an e-mail tandem exchange.

It must also be remembered that in addition to its role in tandem language learning, e-mail is nowadays becoming an increasingly normal mode of communication, and one which students need to learn how to use in its different varieties and functions. Its use as a tool for language learning is thus already justified for its own sake.

As I have indicated, a great deal of research is still needed if we are to make more informed use of e-mail in the language classroom, and the practice of e-mail tandem on a more strongly principled basis. Tandem language learning is an activity which can be exploited in numerous ways and for a variety of different purposes, but a fuller understanding of what really takes place in such an exchange is necessary, in order to enable learners to make the most of the medium. This paper has been an attempt to uncover some perspectives on the learning process in e-mail tandem exchanges, with a view to pointing out directions for further research.

References

Austin, R., and F. Mendlick, 1993: "E-Mail in modern language development". *ReCALL* 9, pp.19–23.

Bachman, L., 1990: *Fundamental Considerations in Language Testing*. Oxford: Oxford: Oxford University Press.

Bannister, D., and F. Fransella, 1989: *Inquiring Man. The Psychology of Personal Constructs*. London: Routledge. (Third edition, reprinted; first edition 1971).

Barson, J., J. Frommer and M. Schwartz, 1993: "Foreign language learning using e-mail in a task-oriented perspective: interuniversity experiments in communication and collaboration", *Journal of Science Education and Technology* 2.4, pp.565–85.

Barson, J., and R. Debski, 1996: "Calling back CALL: Technology in the service of foreign language learning based on creativity, contingency and goal-oriented activity". In M. Warschauer (ed.), 1996b, pp.49–68.

Biber, D., 1988: *Variation across Speech and Writing*. Cambridge: Cambridge University Press.

Brammerts, H., 1996: "Tandem language learning via the Internet and the International E-Mail Tandem Network". In D. Little and H. Brammerts (eds), pp.9–21.

Bruner, J., 1966: *Toward a Theory of Instruction*. Cambridge, MA: Harvard University Press.

Bruner, J., 1977: *The Process of Education*. Second edition. Cambridge, MA: Harvard University Press.

Bruner, J., 1978: "The role of dialogue in language acquisition". In A. Sinclair, R. Javella and W. Levelt (eds), *The Child's Conception of Language*, pp.241–56. New York: Springer.

Canale, M., 1983: "On some dimensions of language proficiency". In J. Oller (ed.), *Issues in Language Testing Research*, pp.333–42. Rowley, MA: Newbury House.

Canale, M., and M. Swain, 1980: "Theoretical bases of communicative approaches to second language teaching and testing", *Applied Linguistics* 1.1, pp.1–47.

Chaudron, C., 1983: "Simplification of input: topic reinstatements and their effects on L2 learners' recognition and recall", *TESOL Quarterly* 17.3, pp.437–58.

Chun, D. M., 1994: "Using computer networking to facilitate the acquisition of interactive competence", *System* 22.1, pp.17–31.

Cohen, A. D., 1987: "Using verbal reports in research on language learning". In C. Færch and G. Kasper (eds), pp.82–95.

Dam, L., 1995: *Learner Autonomy 3: From Theory to Classroom Practice*. Dublin: Authentik.

Dam, L., L. Legenhausen and D. Wolff, 1990: "Text production in the foreign

language classroom and the word processor", *System* 18, pp.325–34.
Færch , C. and G. Kasper (eds.), 1987: *Introspection in Second language Research*. Clevedon: Multilingual Matters.
Flower, L., 1979: "Writer-based prose: a cognitive basis for problems in writing", *College English* 41.1, pp.19–37.
Flower, L., and J. R. Hayes, 1981: "A cognitive process theory of writing", *College Composition and Communication* 35, pp.365–87.
Freire, P., 1972: *Pedagogy of the Oppressed*. Harmondsworth:Penguin.
Grabe, W., and R. B. Kaplan, 1996: *Theory and Practice of Writing*. London: Longman.
Hairston, M., 1982: "The winds of change: Thomas Kuhn and the revolution in the teaching of writing", *College Composition and Communication* 33.1, pp.76–88.
Hoffman, R., 1994: "Powerful, personal: electronic mail and the L2 writing process", *ReCALL* 6.2, pp.53–62.
Hymes, D., 1972: "On communicative competence". In J. B. Pride and J. Holmes (eds), *Sociolinguistics*, pp.269–93. Harmondsworth: Penguin.
Johnson, L. C., 1996: "The keypal connection". In M. Warschauer (ed.), 1996b, pp.131–43.
Joram, E., E. Woodruff, M. Bryson and P. H. Lindsay, 1992: "The effects of revising with a word processor on written composition", *Research in the Teaching of English* 26, pp.167–93.
Kellogg, R. T., 1994: *The Psychology of Writing*. Oxford: Oxford University Press.
Kelly, G., 1955: *The Psychology of Personal Constructs*. Two volumes. New York: Norton.
Kendall, C., 1995: "Individual electronic mail with native speakers". In M. Warschauer (ed.), *Virtual Connections: Online Activities and Projects for Networking Language Learners* , pp.109–15. Honolulu: University of Hawai'i Press.
Little, D., 1991: *Learner Autonomy 1: Definitions, Issues and Problems*. Dublin: Authentik.
Little, D., 1995: "The politics of learner autonomy". Fifth Nordic Workshop on Developing Autonomous Learning, Copenhagen.
Little, D., 1997: "The role of writing in second language learning: some neo-Vygotskian reflections". In R. Kupetz (ed.), *Vom gelenkten zum freien Schreiben im Fremdsprachenunterricht*, pp.117–28. Frankfurt: Lang.
Little, D, to appear: "Learner autonomy and the challenge of tandem language learning via the Internet".
Little, D., and H. Brammerts (eds), 1996: "A guide to language learning in tandem via the Internet". CLCS Occasional Paper No.46. Dublin: Trinity College, Centre for Language and Communication Studies.
Mercer, N., 1995: *The Guided Construction of Knowledge*. Clevedon: Multilin-

gual Matters.
Olson, D. R., 1991: "Literacy as metalinguistics". In D. R. Olson and N. Torrance (eds), *Literacy and Orality*, pp.251–70. Cambridge: Cambridge University Press.
Olson, D. R., 1994: *The World on Paper*. Cambridge: Cambridge University Press.
Peterson, M., 1997: "Language teaching and networking". *System* 25.1, pp.29–37.
Poulisse, N., T. Bongaerts and E. Kellerman, 1987: "The use of retrospective verbal reports in the analysis of compensatory strategies". In C. Færch and G. Kasper (eds.), pp.212–29.
Rueda, R., 1990: "Assisted performance in writing instruction with learning-disabled students". In L. C. Moll (ed.), *Vygotsky and Education*, pp.403–26. Cambridge: Cambridge University Press.
Scholes, R. J., and B. J. Willis, 1991: " Linguists, literacy, and the intensionality of Marshall McLuhan's Western man". In D. R. Olson and N. Torrance (eds), *Literacy and Orality* , pp.215–35. Cambridge: Cambridge University Press.
St John, E., and D. Cash, 1995: "German language learning via e-mail: a case study", *ReCALL* 7.2, pp.47–51.
Tarone, E., 1980: "Communication strategies, foreigner talk, and repair in interlanguage", *Language Learning* 30.2, pp.417–31.
Vygotsky, L., 1962: *Thought and Language*. Cambridge, MA: MIT Press.
Vygotsky, L., 1978: *Mind in Society*. Cambridge, MA: Harvard University Press.
Warschauer, M., 1995: *E-Mail for English Teaching: Bringing the Internet and computer learning networks into the language classroom*. Alexandria, VA: TESOL Publications.
Warschauer, M., 1996a: "Computer-assisted language learning: An introduction". In S. Fotos (ed.), *Multimedia Language Teaching*, pp.3–20. Tokyo: Logos International.
Warschauer, M., (ed.), 1996b: *Telecollaboration in Foreign Language Learning: Proceedings of the Hawai'i Symposium*. (Technical Report #12). Honolulu: University of Hawai'i, Second Language Teaching and Curriculum Center.
Warschauer, M., L. Turbee and B. Roberts, 1996: "Computer learning networks and student empowerment". *System* 24.1, pp.1–14.
Widdowson, H. G., 1978: *Teaching Language as Communication*. Oxford: Oxford University Press.
Wold, A. H., 1992: "Oral and written language: arguments against a simple dichotomy". In A. H. Wold (ed.), *The Dialogical Alternative*, pp.175–94. Oslo: Scandinavian University Press.
Woodin, J., 1997: "Email tandem learning and the communicative curriculum", *ReCALL* 9.1, –pp.22–33.

Appendix 1

Set of guidelines for English-speaking students

Improve your foreign language skills with E-mail

E-MAIL TANDEM PROJECT

SPANISH-ENGLISH

What is it?

This project consists in pairing native speakers of Spanish with native speakers of English so that they can help each other with their foreign language learning. It follows the International E-mail Tandem Network funded by the Commission of the European Union since 1994. This network has put students from different countries in the world in touch with the purpose of helping each other learn languages. You can find more information about the International E-mail Tandem Network at

http://www.slf.ruhr-uni-bochum.de/email/idxeng00.html

Why learn a language via E-mail?

Seweral characteristics/aspects of e-mail, make this medium ideal for language learning

- Messages are sent and received in a matter of minutes. Communication is fast and up to date.
- You have first hand access to a person who speaks the language you are studying.
- Certain commands such as REPLY or ATTACH DOCUMENT facilitate the exchange of corrections and other material you would like to share with your partner.

Which language should you use?

It is important that both partners write in both English and Spanish. This will give you both a chance to write as well as read in the language you are learning. Reading your partner's messages in Spanish will give you a model to follow and a feeling of how Spanish is used by native speakers. Writing willl give you a chance to put into practice what you know and discover areas in which you may have difficulties. For the same reasons your partner needs to write messages in English and read your messages in English, too. It is therefore important that you make sure you use both languages in your e-

mail exchange, either by taking turns or by writing half the message in English and the other half in Spanish.

What should you write about?

First, write an introductory message telling your partner about yourself and your interests. You may have common interests you want to discuss or you may want to ask your partner about information on several aspects of Spain you would like to know more about.

The following list contains activities and topics which you should note are only suggestions for what you might want to talk about with your e-mail partner.

- Where in Spain is your e-mail partner from? What is the historical context of this area? Does your partner speak any other language than Spanish? Do you know what the term "Autonomía" means in a Spanish political context?
- Where does your partner live? In what type of house? With whom? What would be a typical day in your partner's life? What does your partner usually do at weekends? Does your partner think of him/herself as a typical Spanish person?
- What aspects do you have in common with your partner and in what do you differ, and to what extent is all this because of your different nationalities?
- Compare the educational system in Ireland to the one in Spain.
- What do young people in Spain do when they go out? Compare it with what you do here.
- Watch the Spanish news at 2 p.m. in the CLCS language lab (Room 4074) and comment to your partner on anything that catches your attention or that you are not sure about. You can also read the Spanish newspapers on the Internet (e.g. *El País* at <http://www.elpais.es>–).
- Do you know any Spanish traditional festivities – e.g., Las Fallas in Valencia, San Fermines in Pamplona – or what the Spanish traditions for the Easter festivities are?
- Do you know anything about Spanish music or art? Discuss your own interests in music or literature and ask about your partner's.

How to correct your partner's writing

- Think about what you would like your partner to correct in your writing, and do the same.

- Do not try to correct everything. Pick the most important mistakes (make it no more than ten), the ones that prevent understanding or sound awkward (too foreign) to you.
- Write comments together with the corrections. You can ask questions or suggest other ways of expressing something.
- Remember that in order for both of you to benefit from the exchange you should both take the task of correction seriously.
- Correcting your partner's mistakes will help develop your ability to assess your own writing.
- Pay careful attention to your partner's mistakes and way of formulating things in English so you can learn even more about the way the Spanish language works.

Taking the E-Mail exchange one step further

Here are some suggestions for further work on your own, once you have established contact.

- Writing essays on topics suggested above.
- Keep track of your own errors to ensure continued improvement.
- Analyse your partner's messages in Spanish. Review old messages.

© 1999
Marie Christine Appel

Autumn 1990

25. Paul Farrell, *Vocabulary in ESP: a lexical analysis of the English of electronics and a study of semi-technical vocabulary* (82pp.)
26. David Singleton, *The TCD Modern Languages Research Project: objectives, instruments and preliminary results* (19pp.)
27. Federica Scarpa, *Contrastive analysis and second language learners' errors: an analysis of C-test data elicited from beginners in Italian* (47pp.)

Spring 1991

28. Jennifer Ridley, *Strategic competence in second language performance: a study of four advanced learners* (95pp.)
29. Susan Abbey, *A case for on-going evaluation in English language teaching projects* (43pp.)

Spring 1992

30. Frank Donoghue, *Teachers' guides: a review of their function* (51pp.)
31. Barbara Byrne, *Relevance Theory and the language of advertising* (76pp.)

Summer 1992

32. Jonathan West, *The development of a functional-notional syllabus for university German courses* (50pp.)
33. James Mannes Bourke, *The case for problem solving in second language learning* (23pp.)

Autumn 1992

34. Tom Hopkins, *Intertextuality: a discussion, with particular reference to* The Waste Land (28pp.)
35. David Singleton & Emer Singleton, *University-level learners of Spanish in Ireland: a profile based on data from the TCD Modern Languages Research Project* (12pp.)

Spring 1993

36. Frank Maguire, *Sign languages: an introduction to their social context and their structure* (39pp.)
37. Ema Ushioda, *Acculturation theory and linguistic fossilization: a comparative case study* (54pp.)

Summer 1994

38. Carl James, Phil Scholfield & George Ypsiladis, *Cross-cultural correspondence: letters of application* (28pp.)
39. Dieter Wolff, *New approaches to language teaching: an overview* (18pp.)

Spring 1995

40. James A. Coleman, *Progress, proficiency and motivation among British university language learners* (38pp.)

Summer 1995

41. Terence Odlin, *Causation in language contact: a devilish problem* (40pp.)
42. Dee McGarry, *An integrated ESL and cultural studies syllabus* (43pp.)

Spring 1996

43. Terence Odlin, *"Sorrow penny yee payed for my drink": taboo, euphemism and a phantom substrate* (24pp.)
44. Michael Sharwood Smith, *The Garden of Eden and beyond: on second language processing* (20pp.)
45. Diana Masny, *Examining assumptions in second language research* (24pp.)

Summer 1996

46. David Little & Helmut Brammerts (eds), *A guide to language learning in tandem via the Internet* (24pp.)

Spring 1997

47. Barbara Lazenby Simpson, *Social distance as a factor in the achievement of pragmatic competence* (60pp.)
48. Danièle Tort-Moloney, *Teacher autonomy: a Vygotskian theoretical framework* (54pp.)
49. Terence Odlin, *Hiberno-English: pidgin, creole, or neither?* (39pp.)

Autumn 1997

50. Robert J. Fouser, *Pragmatic transfer in highly advanced learners: some preliminary findings* (44pp.)
51. Hans W. Dechert, *What's in a life?* (19pp.)

Spring 1998

52. Ghiath El-Marzouk, *Avoidance defined: the psychology of linguistic determinism and the ontology of cognitive predeterminism* (74pp.)
53. David Singleton, *Lexical processing and the "language module"* (38pp.)

Spring 1999

54. Marie Christine Appel, *Tandem language learning by e-mail: some basic principles and a case study* (64pp.)
55. David Little, Ema Ushioda, Marie Christine Appel, John Moran, Breffni O'Rourke, Klaus Schwienhorst, *Evaluating tandem language learning by e-mail: report on a bilateral project* (54pp.)